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ABSTRACT

This document is designed to assist students in utilizing the Career Information System (CIS) component of the Career Decision-Making (CDM) program developed by the Appalachia Educational Laboratory. (See CE 019 229 for an overview of the total CDM program.) Students can use this guide to follow orientation sessions, complete checklists, and use the other CIS component materials (CE 019 233-240). The guide is divided into the following sections: (1) Touring the Career Information System; (2) Worker Trait Group Digest; (3) Work Activity Descriptions; (4) Work Activity-Worker Trait Group Index; (5) Work Situation Descriptions; (6) Work Situation-Worker Trait Group Index; (7) School Subjects; (8) Aptitudes; (9) Aptitude-Worker Trait Group Index; and (10) Worker Trait Group Keysort Deck Instructions. (BM)

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CAREER INFORMATION SYSTEM

CE 019 239

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

CAREER INFORMATION SYSTEM GUIDE

David W. Winefordner, Director
Career Decision-Making Program
Appalachia Educational Laboratory, Inc.

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Introduction

The **Career Information System Guide** is designed to help students, teachers, and counselors in the use of the other Career Information System materials.* Students can also use the basic reference materials contained in the guide as a textbook in conjunction with the **Individualized Activities for Career Exploration** (IACE) booklet. The guide is divided into the following sections.

Touring the Career Information System

This section contains both general and detailed information on the use of the Career Information System materials available in your school for career exploration.

Worker Trait Group Digest

This section contains brief descriptions of the 12 Career Areas and 66 Worker Trait Groups upon which the entire Career Information System is based.

Work Activity Descriptions

All the tasks performed by workers in any occupation can be grouped into ten basic types of work activities. This section contains descriptions of the ten basic types of work activities.

Work Activity – Worker Trait Group Index

This index contains a listing of the Worker Trait Groups related to each type of work activity. The index can be used to identify Worker Trait Groups related to work activity preferences for further exploration.

Work Situation Descriptions

The work involved in any occupation takes place under certain situations. These situations place demands on the workers. Workers must adapt to the demands of the work situation if they are to perform the work well. The work situations can be grouped into ten basic types. This section contains descriptions of the ten basic types of work situations.

* Developed by Appalachia Educational Laboratory, Inc. and published by McKnight Publishing Company.

Work Situation – Worker Trait Group Index

This index contains a listing of the Worker Trait Groups related to each type of work situation. The index can be used to identify Worker Trait Groups related to work situation preferences for further exploration.

School Subjects

Two Career Information System materials, the **School Subject — Worker Trait Group Chart** and the **School Subject — Occupation Index,** are designed to help students identify occupations for exploration through interests and abilities in school subjects. This section contains instructions on the use of these materials and a reduced copy of the **School Subject — Worker Trait Group Chart** itself.

Aptitudes

This section contains descriptions of the eleven different types of aptitudes defined by the U. S. Department of Labor. The clues following each aptitude description can be used to make aptitude self-estimates.

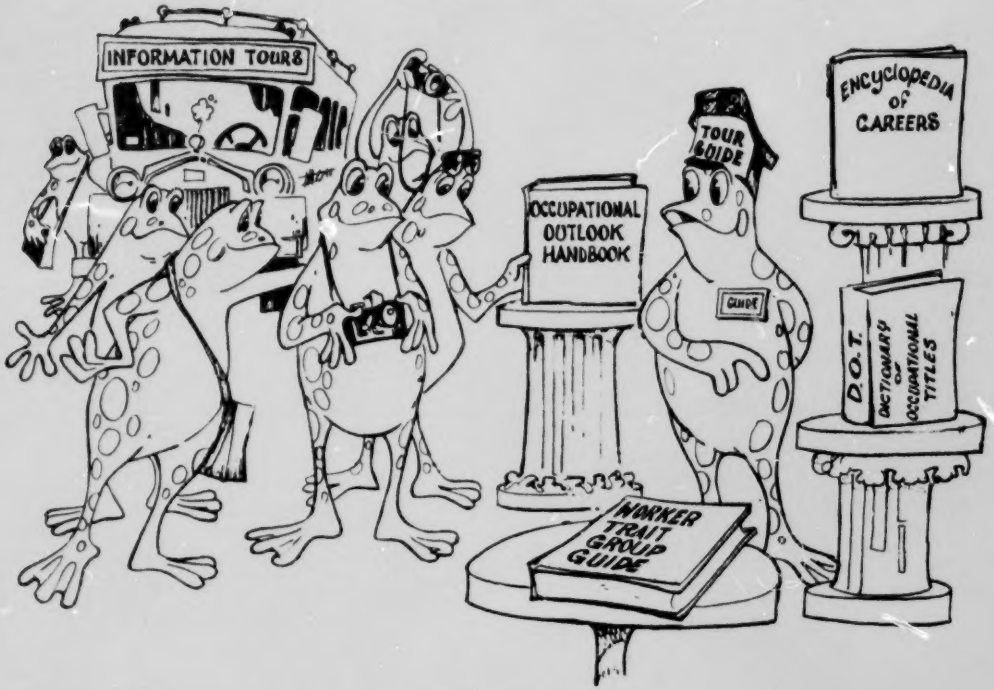
Aptitude – Worker Trait Group Index

This index contains a listing of the key aptitudes and levels of these aptitudes associated with average successful performance for each Worker Trait Group. This index can be used to compare aptitude self-estimates with the key aptitudes and levels of these aptitudes needed for each Worker Trait Group.

Worker Trait Group Keysort Deck Instructions

The Career Information System includes a **Worker Trait Group Keysort Deck.** It is a manual system for locating occupational information on a multi-variable basis. Students can use the **Worker Trait Group Keysort Deck** to identify Worker Trait Groups related to their interests, abilities, work activity preferences, etc. This section contains instructions on the use of the **Worker Trait Group Keysort Deck.**

Touring the Career Information System



Career exploration and decision-making should be based on information about yourself and the world of work. To obtain information about yourself, you should examine your interests, abilities, and other personal traits. Information about the world of work is obtained through career information resources. The **Career Information System** (CIS) in your school contains all types of organized career information resources. These resources are organized to help you find information in two ways.

- On the basis of what you know about **yourself.**
- On the basis of what you know about **occupations.**

The CIS is structured around **12 Career Areas** and **66 Groups.** The Career Areas are based on people's preferences for certain types of work and leisure activities. The Groups are occupational divisions within the Areas. These groups of occupations are based upon the skills and personal traits needed by workers. These areas and groups are also found in the Supplement to the **Dictionary of Occupational Titles,** published by the U. S. Department of Labor.

To learn how you can use the CIS materials for career exploration, you can take a "Guided Tour." Your role as a tourist is to learn how all the CIS materials fit together and what they contain.

The Tour contains both **general** and **detailed** information about CIS materials. The **general** information appears in **boxes.** The **detailed** information **follows** each box. As you tour the materials, **stop at each box** and read the general information. It describes what the CIS material is and why it is used. Read the detailed information following each box **after** you complete the Tour. You may also want to read it when you are ready to use the CIS. Now get ready for the **first stop** on the Tour, where you will view the **Dictionary of Occupational Titles.**

STOP 1: Dictionary of Occupational Titles (DOT)

The Dictionary of Occupational Titles, published by the U. S. Department of Labor, contains descriptions of thousands of occupations. These descriptions are organized into a structure called the Occupational Group Arrangement (OGA). The OGA is another method of grouping occupations and should **not** be confused with the 66 Groups.

Each occupation in the DOT has been assigned a number to indicate the group to which it belongs. This number is a nine-digit code unique to each occupation. These nine-digit codes organize the occupational titles and descriptions in numerical sequence.

EXAMPLE

Occupational Title	Occupational Code
ARCHITECT	001.061-010

To find an occupational description in the DOT, first use the Alphabetical Index located in the back section. Find the occupational title and note the nine-digit code. This code is used to find the page where the occupational description may be found. Remember, this nine-digit code is a sequence number in the OGA listing.

The DOT is an important career information resource to use in exploring the world of work. It is the only source where information can be found on all occupations. Although the descriptions are only paragraphs, they contain a lot of information.

GO TO STOP 2

How to Use the Dictionary of Occupational Titles (DOT)

In the DOT, occupational descriptions are organized by the Occupational Group Arrangement (OGA). Occupations are organized into the OGA on the basis of **products** or **services** provided or the **processes** and **materials** used. There are nine Occupational Categories which have the following code numbers and names:

0, 1 } Professional, technical, and managerial occupations
2 Clerical and sales occupations
3 Service occupations
4 Farming, fishery, forestry, and related occupations
5 Processing occupations
6 Machine trades occupations
7 Bench work occupations
8 Structural work occupations
9 Miscellaneous occupations

The first three digits of the nine-digit DOT code represent the OGA.

OGA CODE

The first digit places the occupation into an **Occupational Category.** The **first** and **second** digit place it into a **Division** within the Category. The **first, second,** and **third** digits place it into a sub-division called a **Group.**

As an example, the code for **ARCHITECT** is 001.061-010. The **first** digit, 0, places this occupation in **Category 0/1.** This category includes professional, technical, and managerial occupations in such fields as art, science, law, and business relations.

When the **second** digit, 0, is combined with the **first** digit, 0, the occupation is placed in **Division 00.** This Division is called "Occupations in Engineering and Architecture." It includes occupations concerned with the practical use of the principles of architecture and engineering.

When the **third** digit, 1, is combined with the **first two** digits, the code 001, places the occupation in the **Group 001.** This Group is called "Architectural Occupations." It includes occupations concerned with the design and construction of buildings and other structures, or landscaping.

The DOT contains descriptions of the Categories, Divisions, and Groups as well as descriptions of the thousands of occupations. The following example shows the descriptions arranged in the OGA sequence.

EXAMPLE

0/1 PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

This category includes occupations concerned with the theoretical and practical aspects of such fields of human endeavor as: architecture; engineering; mathematics; physical sciences; social sciences; medicine and health; education; museum; library and archival sciences; law; theology; the arts; recreation; administration specialties; and management. Also included are occupations in support of scientists, engineers, and other specialized activities such as piloting aircraft, operating radios, and directing the course of ships. Most of these occupations require substantial educational preparation, usually at the university, college, junior college, or technical institute level.

CATEGORY DESCRIPTION

00/01 OCCUPATIONS IN ENGINEERING AND ARCHITECTURE

DIVISION DESCRIPTION → This division includes occupations concerned with the practical application of physical laws and principles of engineering and/or architecture for the development and utilization of machines, materials, instruments, structures, processes, and services. Typical specializations are research, design, construction, testing, procurement, production, operations, and sales. Also includes preparation of drawings, specifications, and cost estimates, and participation in verification tests.

(Continued on next page)

GROUP DESCRIPTION →

001 ARCHITECTURAL OCCUPATIONS

This group includes occupations concerned with the design and construction of buildings and related structures, or landscaping, and/or floating structures, according to aesthetic and functional factors.

OCCUPATION DESCRIPTION →

001.061-010 ARCHITECT (profess. & kin.)

Provides professional services in research, development, design, construction, alteration, or repair of real property, such as private residences, office buildings, theaters, public buildings, or factories: Consults with client to determine functional and spatial requirements and prepares information regarding design, specifications, materials, equipment, estimated costs, and building time. Plans layout of project and integrates engineering elements into unified design. Prepares scale and full size drawings and contract documents for building contractors. Furnishes sample recommendations and shop drawing reviews to client. Assists client in obtaining bids and awarding construction contracts. Supervises administration of construction contracts and conducts periodic onsite observation of work in progress. May prepare operating and maintenance manuals, studies, and reports.

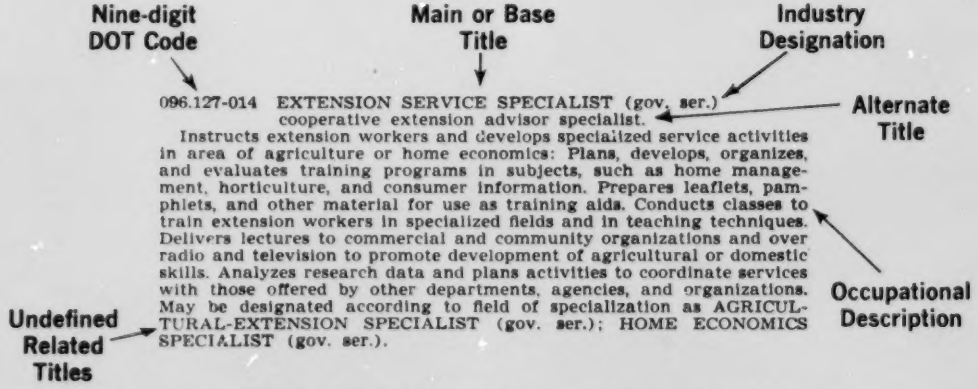
NOTE: The code for "Architect, Marine" has the same first eight-digits as Architect. The last digit shows the sequence in this case. →

001.061-014 ARCHITECT, MARINE (profess. & kin.) architect, naval; naval designer.

Designs and oversees construction and repair of marine craft and floating structures, such as ships, barges, tugs, dredges, submarines, torpedoes, floats, and buoys. Studies design proposals and specif
establish basic characteristics of craft, such as
propulsion, armament, cargo, displa
complements, and fresh
testing of pro
ou

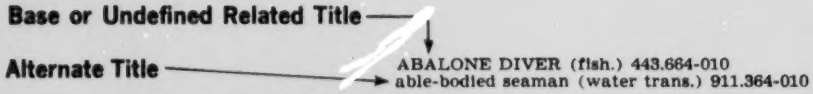
In each occupational description, you will find a wealth of information in condensed form. Note that three types of titles are used to identify an occupation. The **Main or Base Title** is the primary title under which the occupational description is listed. Following this title are **Alternate Titles** or names by which the occupation is known in different parts of the country. At the end of the description are **Undefined Related Titles.** These titles are a specialization of the occupation. The type of specialization is usually described by the title.

The following example is a typical occupational description marked to show its various parts.


Nine-digit DOT Code
Main or Base Title
Industry Designation
Alternate Title
Occupational Description
Undefined Related Titles
096.127-014 EXTENSION SERVICE SPECIALIST (gov. ser.) cooperative extension advisor specialist.
Instructs extension workers and develops specialized service activities in area of agriculture or home economics: Plans, develops, organizes, and evaluates training programs in subjects, such as home management, horticulture, and consumer information. Prepares leaflets, pamphlets, and other material for use as training aids. Conducts classes to train extension workers in specialized fields and in teaching techniques. Delivers lectures to commercial and community organizations and over radio and television to promote development of agricultural or domestic skills. Analyzes research data and plans activities to coordinate services with those offered by other departments, agencies, and organizations. May be designated according to field of specialization as AGRICULTURAL-EXTENSION SPECIALIST (gov. ser.); HOME ECONOMICS SPECIALIST (gov. ser.).

The DOT also contains an Alphabetical Index located in the back. This index contains a listing of occupational titles and their nine-digit codes. **Base** and **Undefined Related Titles** are in **large** letters and **Alternate Titles** are in **small** letters.

ALPHABETICAL INDEX EXAMPLE


Base or Undefined Related Title
Alternate Title
ABALONE DIVER (fish.) 443.664-010
able-bodied seaman (water trans.) 911.364-010

When you want the description for a specific occupational title, turn to the Alphabetical Index. Locate the title in the listing and make a note of the nine-digit code. Use this code to locate the occupational description. Remember, the descriptions are in sequence by the nine-digit code, **not by title.**

STOP 2: Supplement to the Dictionary of Occupational Titles

The occupations of the DOT are organized in the Supplement by **12 Career Areas** and **66 Groups.** Each Career Area has been titled and identified by a two-digit code, 01 to 12. A brief statement describes the type of interest the Career Area represents. Within each Career Area, occupations are organized into Groups. Each Group has been titled and identified by a four-digit code. A description of the Group and a listing of the occupations it contains follow the Group title and code. These 66 Groups are further divided into **Subgroups.** The Subgroups organize related occupations more specifically.

EXAMPLE

Area Code (2 digits) →	01. ARTISTIC
Group Code (4 digits) →	01.01 Literary Arts
Subgroup Code (6 digits) →	01.01-01 Editing 01.01-02 Creative Writing 01.01-03 Criticism

To identify a Group for an occupation, use the Alphabetical Index at the back of the Supplement. Locate the title and note the six-digit Career Area/Group/Subgroup Code

EXAMPLE

CHEMICAL RESEARCH ENGINEER 008.061-22 (prof & kind) 05.01.01. Use this code to locate the page where the Group description can be found. The Career Areas and Groups are in numerical sequence. At the end of each Group description is a complete list of occupations listed by Subgroup.

You can relate your interests and abilities to the Career Areas and Groups to explore a number of similar occupations at one time. The main use of the Supplement in the CIS is to obtain a full listing of occupations for each Group.

GO TO STOP 3

How to Use the Supplement to the Dictionary of Occupational Titles (DOT)

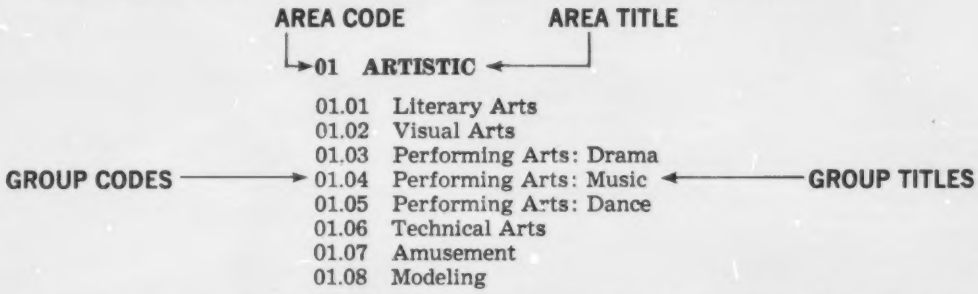
The Supplement to the DOT has been designed to aid you in occupational exploration leading to education, training, and job placement. To help you relate your interests and abilities to occupations, the Department of Labor has identified 12 Career Areas. Each of the 12 Career Areas has been titled and identified by a two-digit number, ranging from 01 to 12.

CAREER AREAS

Area Code	Area Title	Area Code	Area Title
01	ARTISTIC	07	BUSINESS DETAIL
02	SCIENTIFIC	08	PERSUASIVE
03	NATURE	09	ACCOMMODATING
04	AUTHORITY	10	HUMANITARIAN
05	MECHANICAL	11	SOCIAL-BUSINESS
06	INDUSTRIAL	12	PHYSICAL PERFORMING

The common interests people have in occupations are used to define each Career Area. For example, Career Area 01 is defined in the following way: "This is an interest in creative expression of feelings or ideas."

The 12 Career Areas contain 66 Groups. Within each Career Area, similar occupations are organized into Groups. The Groups are generally arranged within each Career Area from the **highest** to the **lowest** level of **aptitudes** and **skills.** Each Group has been titled and identified by a four-digit number. Of these four digits, the first two represent the Career Area Code. The second two digits represent the position of a Group within an Area. All four digits make up the Group Code, as shown in the following example of the first Career Area.



Each of the Group descriptions contains a summary of the occupations' common elements. The summary describes the work performed, clues for relating people to the occupations, suggested training and methods of entry, and other factors to consider.

These 66 Groups are further divided in **Subgroups.** The Subgroups help you identify important relationships among the occupations in the Group. In most cases, similar work performed is the basis for the subgrouping. Each Subgroup is identified by a title and six-digit number. The first four digits represent the Area and Group Codes, while the last two digits represent the position of the Subgroup within the Group. All six digits make up the Subgroup Code.

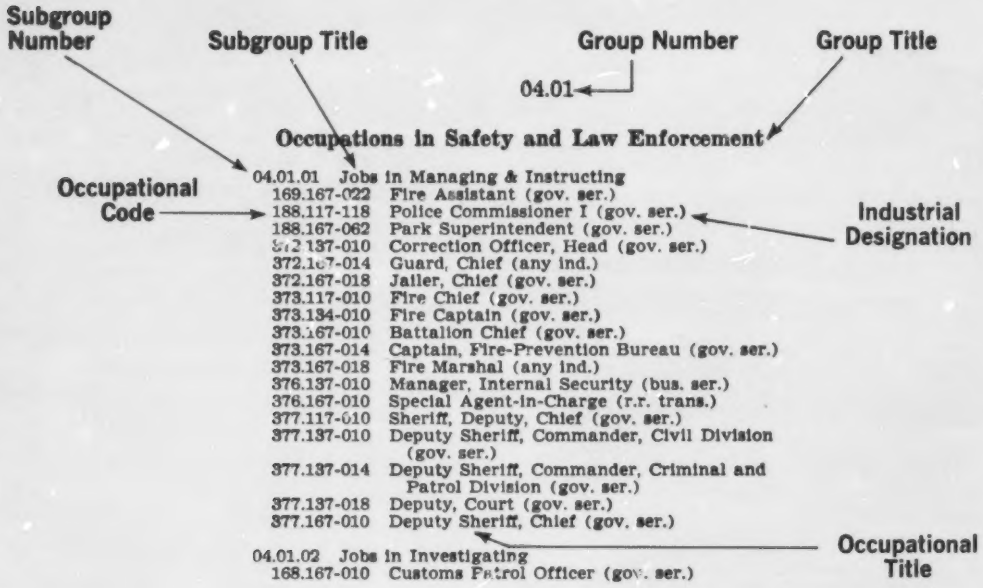
EXAMPLE

		Titles
Area Code (2 digits)	01.	ARTISTIC
Group Code (4 digits)	01.01	Literary Arts
Subgroup Code (6 digits)	01.01-01	Editing
	01.01-02	Creative Writing
	01.01.03	Criticism

A complete list of occupations follows each Group description. The occupations within the list are divided into various Subgroups.

13

EXAMPLE


Subgroup Number
Subgroup Title
Group Number
Group Title
04.01
Occupations in Safety and Law Enforcement
Occupational Code
Industrial Designation
Occupational Title
04.01.01 Jobs in Managing & Instructing
169.167-022 Fire Assistant (gov. ser.)
188.117-118 Police Commissioner I (gov. ser.)
188.167-062 Park Superintendent (gov. ser.)
372.137-010 Correction Officer, Head (gov. ser.)
372.167-014 Guard, Chief (any ind.)
372.167-018 Jailer, Chief (gov. ser.)
373.117-010 Fire Chief (gov. ser.)
373.134-010 Fire Captain (gov. ser.)
373.167-010 Battalion Chief (gov. ser.)
373.167-014 Captain, Fire-Prevention Bureau (gov. ser.)
373.167-018 Fire Marshal (any ind.)
376.137-010 Manager, Internal Security (bus. ser.)
376.167-010 Special Agent-in-Charge (r.r. trans.)
377.117-010 Sheriff, Deputy, Chief (gov. ser.)
377.137-010 Deputy Sheriff, Commander, Civil Division (gov. ser.)
377.137-014 Deputy Sheriff, Commander, Criminal and Patrol Division (gov. ser.)
377.137-018 Deputy, Court (gov. ser.)
377.167-010 Deputy Sheriff, Chief (gov. ser.)
04.01.02 Jobs in Investigating
168.167-010 Customs Patrol Officer (gov. ser.)

If you want to find the Group to which a specific occupation belongs, use the Alphabetical Index at the back of the Supplement. This index gives the Career Area/Group/Subgroup Code as well as the Occupational Code. The key in the following example explains the title differences.

INDEX EXAMPLE

CHEMICAL RESEARCH ENGINEER 008.061-022 (prof & kin) 05.01.01
CHEMICAL - STRENGTH TESTER 582.587-010 (textile) 06.03.02
CHEMICAL - TEST ENGINEER 008.061-026 (prof & kin) 05.01.04
chemical weigher (DYE WEIGHER 550.684-014) 06.04.17
CHEMIST 022.061-010 (prof & kin) 02.01.01
Chemist, Analytical (CHEMIST 022.061-010) 02.01.01
chemist, biological (BIOCHEMIST 041.061-026) 02.02.03
Chemist, Clinical (BIOCHEMIST 041.061-026) 02.02.03
ist, Enzymes (BIOCHEMIST 041.061-026) 02.02.03
D 022.061-014 (prof & kin) 02.02.04
(CHEMIST, 022.061-010) 02.01.01
022.061-010) 02.01.01
m 041.061-026) 02.02.03

KEY

- **Main or Base Title:** all capital letters.
- **Undefined Related Titles:** beginning capital letters with Main Title and Code in parentheses.
- **Alternate Titles:** all lower case letters with Main Title and Code in parentheses.
- Note: Main Titles are the ones used in CIS materials to locate information.

STOP 3: Alphabetical Card File

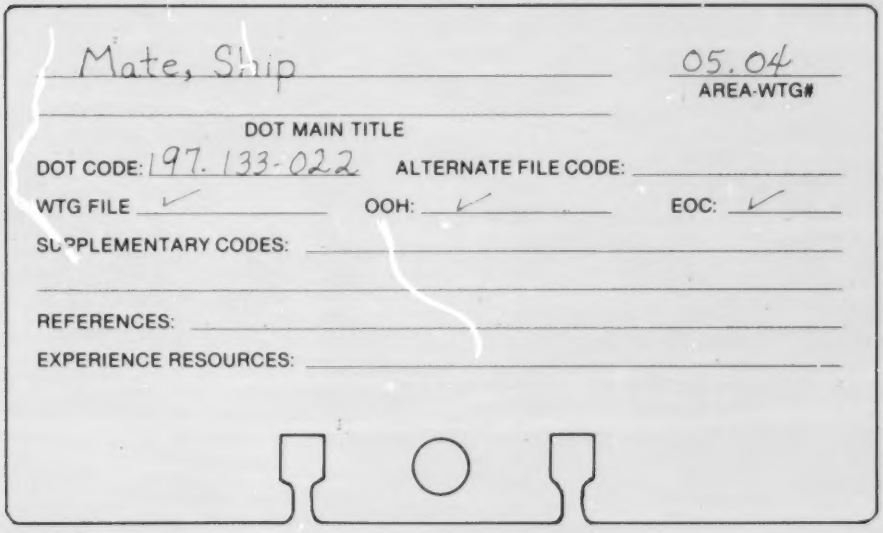
The Alphabetical Card File contains an alphabetical listing of all of the occupational titles in the CIS. It works like the card catalog in your school library. It gives you codes under which you can locate information about occupations. These codes represent the Career Areas and Groups in the Supplement of the DOT. However, the Groups will be called **Worker Trait Groups** (WTG) when used in the CIS materials. These Worker Trait Groups are more fully explained in STOP 7.

The Alphabetical Card File can be used to locate a specific occupational title, the Career Area - WTG number, as well as resources in the CIS containing information about the occupation.

GO TO STOP 4

How to Use the Alphabetical Card File

The **Alphabetical Card File** is easy to use. Just look up the title of an occupation you want to explore. The following illustration shows what a card looks like.



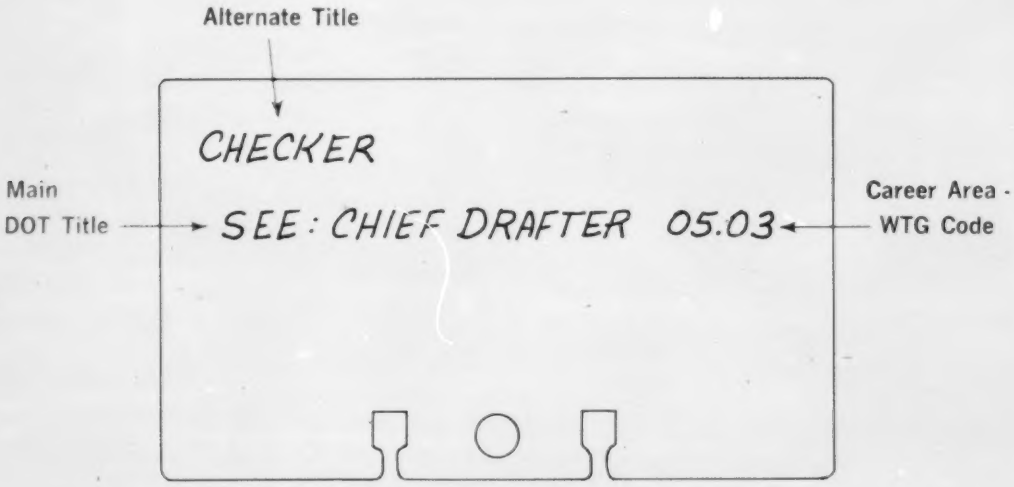
The job title in the upper left-hand corner of the card is the Main Title used in the DOT. In the upper right-hand corner of the card is the Area - WTG number. All information is the CIS about an occupational title can be found using this number. The nine-digit number entered after "DOT Code" distinguishes the occupation from all other occupations. It is used to locate the occupational description in the DOT. The space after "Alternate File Code" contains an

entry only when the filing system being used has been adapted to the Worker Trait Group structure. The entry indicates where the information can be found in the adapted system.

If there are occupational briefs on file, there is a checkmark after "WTG File." If there is a reference for the occupation in the **Occupational Outlook Handbook,** there will be a checkmark after "OOH." EOC stands for **"Encyclopedia of Careers."** If there is information in the EOC on the occupation, there will be a checkmark. The codes appearing after "Supplementary Codes" are used to find information in the Supplementary Section of the File Content Notebook for audiovisuals and bound materials. (They are explained more fully in STOP 4.)

If there is information on the occupation in resources other than the OOH and the EOC, codes will be entered in the space after "References." Use these codes to find the references to the occupation in the **Worker Trait Group Index to Occupational Information.** (This index is described in Stop 6.) Codes entered in the space after "Experience Resources" identify the types of experience available related to the occupation. If you know the type of experience the code stands for and have an interest in it, you can schedule the experience with the person responsible. If you do not know what the code stands for, look up the definition on the Experience Resources divider in the **Worker Trait Group Index to Occupational Information.** You may also wish to see what experiences are available for other occupations belonging to that Worker Trait Group. These are located behind the Experience Resources divider in the **Worker Trait Group Index to Occupational Information.**

Also in the **Alphabetical Card File** is another type of card. This card cross-references alternate or other titles to the Main DOT Title and correct Career Area - WTG code. The following is an example of this card.



STOP 4: File Content Notebook

The **File Content Notebook** contains a list of the occupational titles filed in your school's CIS. It is organized by the 12 Career Areas and 66 Worker Trait Groups. The Notebook is used to determine the titles of occupational briefs and pamphlets that have been filed in the CIS.

GO TO STOP 5

How to Use the File Content Notebook

The **File Content Notebook** works like a table of contents. It is an outline of what the CIS contains. It is organized by the Career Areas - Worker Trait Groups. The Notebook has a divider for each of the 12 Career Areas and 66 Worker Trait Groups. Behind each Area divider is a sheet of paper containing a list of omnibus materials. (These are briefs and pamphlets that contain information about more than one occupation.) These materials are filed in the Vertical File behind the appropriate Area divider. You should check this list for additional information on the Area-WTG you are exploring.

Behind each Group divider is a form which lists the occupational titles for which there is information in the CIS. Look at the following sample form, then read the detailed explanation of each column.

SAMPLE

Scientific
DOT Area Title

02.02
Area - WTG Number

Life Sciences
Worker Trait Group Title

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT Main Title	DOT Code
			Animal Scientist	040.061-014

Column 1: VERTICAL FILE PIECES. In this column, a tally (~~𝍸~~) is kept of the number of briefs that are filed in the Worker Trait Group Vertical File for each title. (The Vertical File is explained in STOP 5.) The tally shows you exactly how many pieces of information to look for in the file.

Column 2: ALTERNATE FILE CODE. This column contains information when occupational materials have not been filed by Worker Trait Groups in the Vertical File, but are organized into a different filing system. If another filing system is being used at your school, your teacher or counselor will explain it to you.

Column 3: SUPPLEMENTARY CODE. Supplementary codes are used to indicate the presence of information not filed in the Vertical File. When this code appears in the column, you should turn to the Supplemental Section in the back of the **File Content Notebook.** There you will find the title of the material and its location. These resources may be audiovisual or bound materials which are stored in cabinets or on shelves. The supplementary codes are abbreviations of the type of material stored.

CODE EXAMPLE

Audiovisual Material
↘ Av 1, Av 2, Av 3
∠ Identifying Number 17

You can find a full list of these abbreviations on the divider for the Supplementary Section of the **File Content Notebook.**

Column 4: DOT MAIN JOB TITLE. This column is used to list the main job title as it is found in the DOT. Alternate and Undefined Related Titles are not listed. The entries on this form are not in alphabetical order or any particular sequence. As a new piece of information is added to the file, the title is listed or a tally mark is made. You should scan this column to see what titles are contained in the CIS.

Column 5: DOT CODE. The code for each title consists of nine digits as explained in **STOP 1.** This code is used to locate the occupational description in the DOT.

The Supplemental Section of the **File Content Notebook** has two Divisions: one for **audiovisual** materials and one for **bound** materials. The printed form in each Division contains a list of the available audiovisual or bound materials related to the Area-Worker Trait Groups. The purpose of this section is to help you locate these materials in the CIS. Major bound sources such as the **Occupational Outlook Handbook** and the **Encyclopedia of Careers** are in a separate Index (see STOP 6).

Look at the following example of a form, then read the detailed explanation of each column.

EXAMPLE

Bound (Bd)

Division Title/Code

Supplementary Code	Title of Material	Location	Area — WTG Number(s)
Bd 1	So You Want to be a Lawyer	Shelf	11.04

At the top of the form you will find the title of the Division and its abbreviation.

Column 1: SUPPLEMENTARY CODE. The Supplementary Code is the abbreviation of the division title such as Bound and the identifying number for the material, e.g., Bd 1, Bd 2, Bd 3. The bound resource would have the reference number on it and would be placed in sequence with the number.

Column 2: TITLE OF MATERIAL. This column is used to record the title of the audiovisual or bound material available in the CIS. Only the title of the material is listed.

Column 3: LOCATION. This column is used to indicate where the materials are stored, such as in a cabinet, on a reference shelf, or in the library.

Column 4: AREA - WTG NUMBER(S). The WTG number(s) for the occupation(s) described in the materials are recorded in this column. Materials describing various occupations will have more than one number recorded here if the occupations belong to different Worker Trait Groups.

STOP 5: Vertical File

Briefs and pamphlets about a single occupation are stored behind the divider of the Worker Trait Group to which the occupation belongs. To locate information in this File, use the Area/Worker Trait Group number. Pamphlets about occupations belonging to more than one group in the Area (omnibus materials) may be filed behind the Area divider.

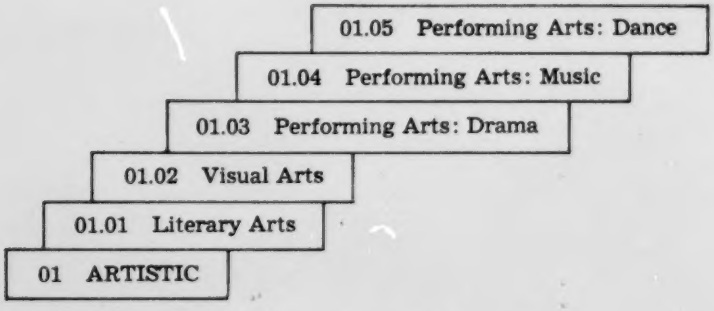
GO TO STOP 6

How to Use the Vertical File

The Vertical File contains 12 Career Area file dividers and 66 Worker Trait Group file dividers. The purpose of the Vertical File is to store occupational briefs and pamphlets about single occupations. These are placed behind the Worker Trait Group file dividers. The Worker Trait Group dividers are in sequence by the Area - WTG number. You should use the **File Content Notebook** before using the Vertical File. Look at the listing of occupations contained in the file. For any occupation on which you want information, check the tally marks to see how many pieces are in the file. Pamphlets about occupations belonging to more than one group in the Career Area (omnibus materials) may be filed behind the Career Area divider.

The following sample shows how file dividers would appear in the Vertical File.

SAMPLE



STOP 6: Worker Trait Group Index to Occupational Information

The **Worker Trait Group Index to Occupational Information** contains information on two types of resources. The first type is major occupational information resources such as the **Occupational Outlook Handbook** (OOH) and the **Encyclopedia of Careers** (EOC). Occupational titles contained in these resources have been indexed to Worker Trait Groups.

The second type of resource is called Experience Resources. This is information about experiences that are available to you for learning about occupations. Examples would be people employed in an occupation who are willing to talk with you, part-time work experiences where you could do related tasks or observe workers, or visits to actual work sites. These resources are listed by Worker Trait Groups. However, you will need to schedule these experiences through the person responsible for the career resources.

GO TO STOP 7

How to Use the Worker Trait Group Index to Occupational Information

This index contains several sections representing different occupational information resources such as the **Occupational Outlook Handbook** (OOH), the **Encyclopedia of Careers** (EOC), and the **Vital Information for Education and Work** (VIEW). In addition, it contains an Experience Resources section.

Each resource section contains a listing of occupations by Worker Trait Group. The occupational titles are referenced to the appropriate resource publication page. The purpose of this index is to help you find additional information related to the Worker Trait Groups you are exploring. To use this index, turn to the Area - WTG number in one of the sections. There you will find a listing of occupations, the DOT code, and the resource page number.

Look at the following sample of an index page for the **Occupational Outlook Handbook** (OOH) section. Then read the detailed explanation for each column.

SAMPLE

Area-WTG No.	Area - Worker Trait Group Title DOT Title and OOH Title	DOT Code	OOH Page
05	MECHANICAL		
05.01	ENGINEERING		
	Aeronautical Engineer	002.061-014	329
	OOH Title: Aerospace Engineer		
	Architect	001.061-010	691

Column 1. Area - WTG No. — these are the numbers identifying the Career Area and the Worker Trait Group. These numbers are the same as those found in other CIS materials.
Column 2.

- Area Worker Trait Group Title — when the word "NONE" appears in this column, it means that the resource does not contain any occupations for this WTG.
- DOT Title — the occupational title as listed and defined in the DOT.
- OOH Title — the occupational title as used in the OOH.

Column 3. DOT Code — the nine-digit number used to classify and organize DOT Main titles.
Column 4. OOH Page — the page number in the **Occupational Outlook Handbook** on which information about the job title is found.

The index also contains an Experience Resources section. This section contains a listing of additional occupational information resources available to you. These resources include workers, work experience sites, and school clubs and activities. To use this listing, locate the Experience Resources form behind the appropriate section divider. There are forms only for those Worker Trait Groups for which experiences are available. This form contains the occupational title and experience code. This code is explained on the Experience Resources section divider. Remember, to schedule these experiences, go through the person responsible for career resources.

STOP 7: Worker Trait Group Guide

This is the final stop on the tour. **The Worker Trait Group Guide** is similar to the Supplement to the **Dictionary of Occupational Titles (DOT).** However, the **Worker Trait Group Guide** expands upon the information about the 12 Career Areas and 66 Worker Trait Groups. The guide has been designed to be used with the access materials of the CIS such as checklists and charts. Use the **Worker Trait Group Guide** to get information about the Career Areas and Worker Trait Group. The Supplement to the DOT should only be used to get a full listing of the occupations belonging to each group.

There are two major sections in this guide. In addition to the Career Area and Worker Trait Group descriptions, the guide contains appendices. The appendices expand upon the information contained in certain sections of the Worker Trait Groups such as Work Activities, Work Situations, and Aptitudes.

How to Use the Worker Trait Group Guide

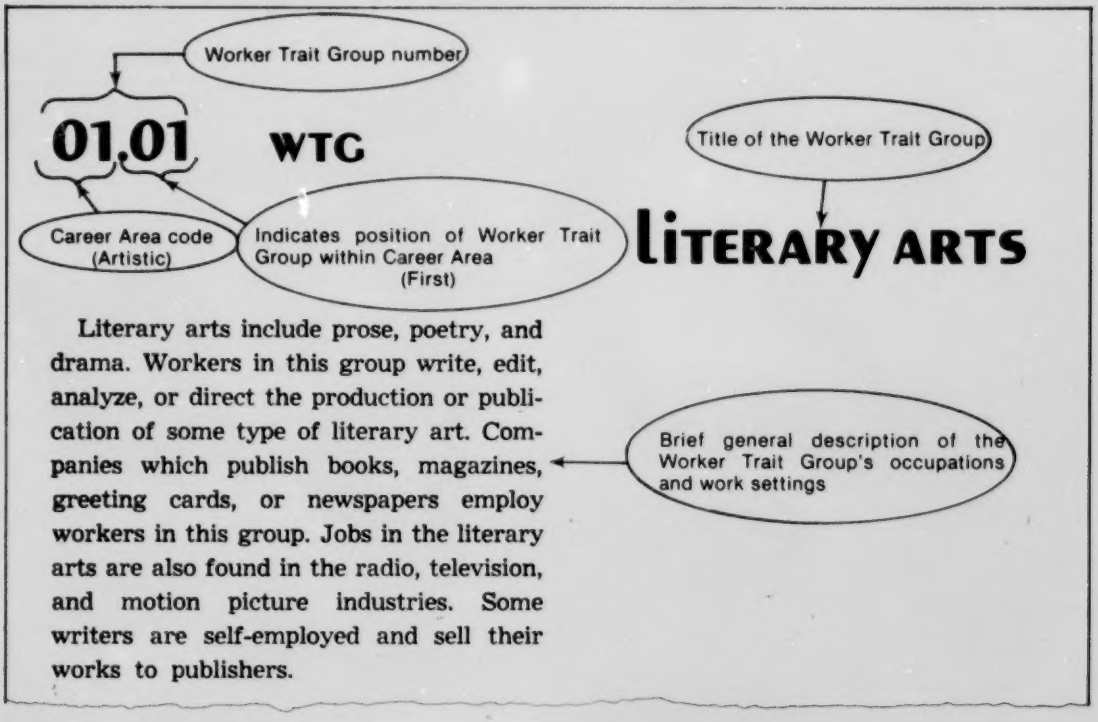
This guide can be used for exploration or to gain a general understanding of the world of work. The following descriptions and examples explain in detail each section contained in the **Worker Trait Group Guide.**

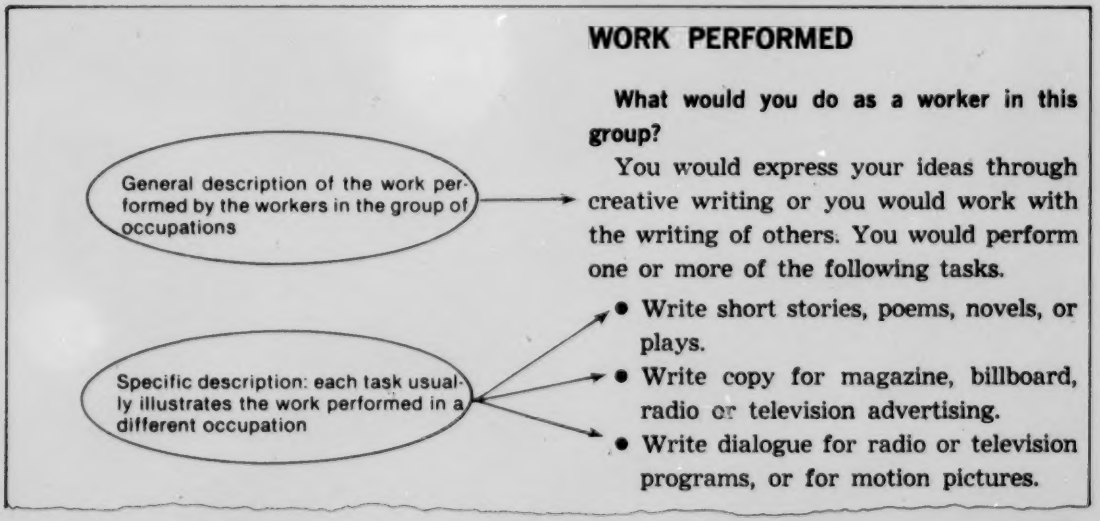
Career Areas. The Career Area descriptions are general overviews of what the Worker Trait Groups within each Career Area have in common. The Career Area description first states the type of interest workers in occupations belonging to the Career Area usually have. Following the interest statement is general information about the Career Area such as work performed and job settings. Each description is identified by the two-digit Career Area code and title.

Career Area Code
01.
Career Area Title
ARTISTIC
Interest Statement
Description
This is an interest in creative expression of **feelings** or **ideas.**
You can satisfy this interest in several of the creative or performing arts fields. You may enjoy literature. Perhaps writing or editing would satisfy you. You may prefer to work in the performing arts. You could direct or perform in drama, music, or dance. You may enjoy the visual arts. You could find a job as a critic in painting, sculpture, or ceramics. You may want to use your hands to create or decorate products. You may also prefer to model or develop entertaining acts.

Worker Trait Groups. The Worker Trait Group descriptions contain general information about groups of similar occupations. The descriptions can provide an overview to help you identify groups of occupations to explore. You can use the other CIS materials to obtain information on specific occupations.

The following Worker Trait Group description has been broken into sections to illustrate the different kinds of information it contains.


Worker Trait Group number
01.01 WTG
Career Area code (Artistic)
Indicates position of Worker Trait Group within Career Area (First)
Title of the Worker Trait Group
LITERARY ARTS
Literary arts include prose, poetry, and drama. Workers in this group write, edit, analyze, or direct the production or publication of some type of literary art. Companies which publish books, magazines, greeting cards, or newspapers employ workers in this group. Jobs in the literary arts are also found in the radio, television, and motion picture industries. Some writers are self-employed and sell their works to publishers.
Brief general description of the Worker Trait Group's occupations and work settings


WORK PERFORMED
What would you do as a worker in this group?
General description of the work performed by the workers in the group of occupations
You would express your ideas through creative writing or you would work with the writing of others. You would perform one or more of the following tasks.
Specific description: each task usually illustrates the work performed in a different occupation
• Write short stories, poems, novels, or plays.
• Write copy for magazine, billboard, radio or television advertising.
• Write dialogue for radio or television programs, or for motion pictures.

WORKER REQUIREMENTS

What skills, abilities, and interests would help you succeed in this kind of work?

To do this type of work, you should have the ability to learn, the skill to perform, and the interest in doing most of the following items. Not all items are important to every job.

A summary of the most important skills, abilities, and interests needed by workers in the group to perform well.

- Express original ideas or interpret the ideas of others through writing.
- Analyze writings for form, style, plot, and artistic value.
- Know the rules of grammar and have a large vocabulary.
- Edit or critique the writing of others.
- Create advertising copy that will attract readers, viewers, or listeners.
- Plan and direct the work of a staff of writers.

CLUES

Do you have or can you develop these skills, abilities, and interests?

Your answers to the following questions will help you decide.

A list of questions to help you decide if you have or can develop the skills, abilities, and interests related to the group of occupations. Your personal experiences can help you answer the questions.

- Have you written book reports? Do you enjoy reviewing the writing of others?
- Have you written an original story? Can you create characters and situations that interest and entertain others?
- Have you written poems? Do you enjoy reading or writing poetry?
- Have you edited or written feature articles for a school paper or yearbook?
- Have you played word games or solved crossword puzzles? Do you have a large vocabulary?

PREPARATION

How can you prepare for and enter this kind of work?

Jobs in this field require extensive writing experience. Working for the school newspaper or yearbook can help you gain writing experience. Writing assignments in English and journalism courses can also help you gain it. Community colleges and universities offer programs that help prepare for this work. Courses in English and creative writing develop important skills. Courses in art, music, or drama help critics in these fields gain the needed knowledge and background. Editing jobs require several years of writing experience.

The **training** and **experience** worker's need to enter the occupations in the group.

Self-employed writers often use literary agents to help them find publishers. These agents make suggestions about writing topics and style. Publishers may hire free-lance writers to write about a certain subject. To be hired, writers should frequently submit writing samples to magazines and other publishers. Some employers require samples of published writings.

OTHER CONSIDERATIONS

Additional information you would need to consider

What else should you know about these jobs?

Most new workers in writing start with routine assignments such as proofreading. Few newcomers are employed as creative writers.

QUALIFICATIONS PROFILE

How to use the Qualifications Profile section of the Worker Trait Group description

The following information is a summary of the traits and qualifications related to the workers in this group. As you read it, try to relate your own interests, abilities, aptitudes, and preferences to these worker traits.

WORK ACTIVITIES

See Appendix A of the **Worker Trait Group Guide** for detailed work activity descriptions

Workers generally prefer the following types of work activities.

5. Activities resulting in recognition or appreciation from others.
6. Activities involving the communication of ideas and information.
8. Activities involving creative thinking.

WORK SITUATIONS

See Appendix B of the **Worker Trait Group Guide** for detailed work situation descriptions

Workers are willing to adjust to the following types of work situations.

3. Planning and directing an entire activity.
4. Dealing with people.
5. Influencing people's opinions, attitudes, and judgments.
7. Making decisions using personal judgment.
9. Interpreting and expressing feelings, ideas, or facts.

WORKER FUNCTIONS

See Appendix C of the **Worker Trait Group Guide** for detailed information on worker functions

These may be the most difficult functions workers perform when dealing with data, people, and things.

	Low	Avg.	High	
DATA	☐	☐	■	– Synthesizing
PEOPLE	■	☐	☐	– Speaking/Signaling
THINGS	■	☐	☐	– Handling

PHYSICAL DEMANDS

See Appendix D of the **Worker Trait Group Guide** for detailed descriptions of the physical demands

Workers must be able to perform the following types of physical activities.

S Sedentary work.
5. Talking and/or hearing.
6. Seeing.

WORKING CONDITIONS

Workers need to adjust to the following physical surroundings and working conditions.

I Inside.

See Appendix E of the **Worker Trait Group Guide** for detailed descriptions of the working conditions

APTITUDES

These levels of aptitudes (ability to learn) are related to the average successful performance of workers in this group. Levels are rated on a 5 to 1 scale.

See Appendix F of the **Worker Trait Group Guide** for aptitude definitions

Aptitudes	Levels Low 5 4 3 to 2 1 High
G – General	2 – 1
V – Verbal	2 – 1

GENERAL EDUCATION DEVELOPMENT (GED)

GED is the general level of learning and reasoning acquired through schools, experience, or self-directed study. There are six GED levels, ranging from the most complex (6) to the simplest (1). The following statement explains why these workers need the GED level **5.**

See Appendix G of the **Worker Trait Group Guide** for the GED level definitions

Workers apply logical thinking to express ideas through creative writing. They collect or interpret information. They may use their creative ability to edit or guide the work of others. These workers deal with abstract concepts such as styles and symbols. They also work with reference materials and typewriters.

Specific description illustrating the Worker Trait Group GED level

PREPARATION AND TRAINING

Workers usually gain the competencies and credentials they need to enter or advance to occupations in this group through formal education and training programs or through work experience.

Entry and Advancement Information

E – To enter some occupations workers only need the required competencies and credentials.
A – To advance to some occupations workers not only need the required competencies and credentials but also related work experience.

Related Formal Training Programs

Workers usually gain the competencies and credentials they need to enter occupations in this group in the following ways.

C – College studies in English, literature, or composition.
T – Studies in English at the community college level.
NFT – Some occupations in this group have no related formal education or training programs.

Training Time

Occupations in this group may require from 2 years up to and over 10 years (SVP 7, 8, 9).

Related High School Level Courses

The following high school courses are helpful in preparing for the occupations in this group.

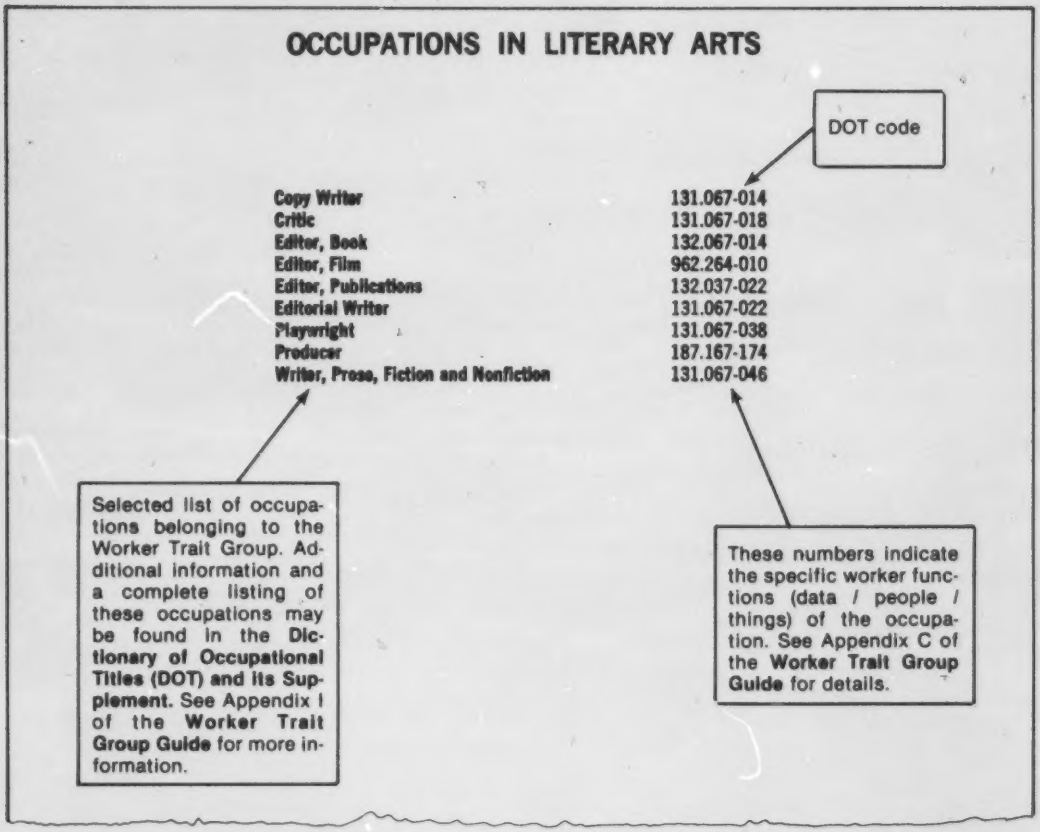
Important Courses

- Courses required for entrance to post high school formal programs.
- Language Skills, Literature, Composition.

Helpful Courses

- Music, Drama.

This section describes the different ways by which people can prepare for the group's occupations. See Appendix H for detailed information.


OCCUPATIONS IN LITERARY ARTS
DOT code
Copy Writer 131.067-014
Critic 131.067-018
Editor, Book 132.067-014
Editor, Film 962.264-010
Editor, Publications 132.037-022
Editorial Writer 131.067-022
Playwright 131.067-038
Producer 187.167-174
Writer, Prose, Fiction and Nonfiction 131.067-046
Selected list of occupations belonging to the Worker Trait Group. Additional information and a complete listing of these occupations may be found in the Dictionary of Occupational Titles (DOT) and its Supplement. See Appendix I of the Worker Trait Group Guide for more information.
These numbers indicate the specific worker functions (data / people / things) of the occupation. See Appendix C of the Worker Trait Group Guide for details.

Worker Trait Group Guide Appendices. The appendices contain detailed information concerning the factors in the Qualification Profile such as Aptitudes, Work Activities, and Work Situations. In addition, one of the appendices explains how to use the **Dictionary of Occupational Titles.**

Worker Trait Group Digest

01. ARTISTIC

This is an interest in creative expression of **feelings** or **ideas.**

You can satisfy this interest in several of the creative or performing arts fields. You may enjoy literature. Perhaps writing or editing would satisfy you. You may prefer to work in the performing arts. You could direct or perform in drama, music, or dance. You may enjoy the visual arts. You could find a job as a critic or creator in painting, sculpture, or ceramics. You may want to use your hands to create or decorate products. You may also prefer to model or develop entertaining acts.

01.01 LITERARY ARTS

Literary arts include prose, poetry, and drama. Workers in this group write, edit, analyze, or direct the production or publication of some type of literary art. Companies which publish books, magazines, greeting cards, or newspapers employ workers in this group. Jobs in the literary arts are also found in the radio, television, and motion picture industries. Some writers are self-employed and sell their work to publishers.

01.02 VISUAL ARTS

Visual arts include drawing, painting, sculpture, ceramics, photography, and design. Advertising agencies, printing and publishing firms, art schools, and department stores employ visual artists. Television and motion picture studios and industrial firms also employ these workers. Some artists are self-employed. They may teach or may sell their work themselves or through an agent.

01.03 PERFORMING ARTS: DRAMA

Drama, as used here, includes plays, musicals, readings, pantomimes, and similar performances. Tasks in this group include performing, teaching, and directing. Radio stations, television and motion picture studios, and theaters employ workers in this group. Schools and colleges also employ some of these workers.

01.04 PERFORMING ARTS: MUSIC

Music, as used here, includes playing an instrument, singing, arranging, and composing. Teaching and directing music groups are also included. Workers in this group can find jobs in theaters, television and radio stations, concert halls, or wherever music is performed. Schools and colleges, recording studios, and music publishing companies also employ these workers.

01.05 PERFORMING ARTS: DANCE

Dance, as used here, includes composing, performing, or teaching rhythmic body movements. Television and movie studios, theaters, and night clubs employ workers in this group. Schools and colleges may also employ these workers.

01.06 TECHNICAL ARTS

Technical arts includes graphics, handcrafts, and product decoration. Workers in this group use materials such as wood, stone, clay, metal, and gemstones. Industries such as printing and publishing, map making, taxidermy, and jewelry employ these workers. Companies making furniture or ceramic tiles also have jobs in this group. Some workers are self-employed and sell their own products.

01.07 AMUSEMENT

Amusement, as used here, includes performing an act to entertain people in a setting such as a carnival. Workers attract people's attention by shouting, gesturing, or wearing a costume. Carnivals, street fairs, and amusement parks often employ these workers.

01.08 MODELING

Modeling involves appearing before a camera or an audience with no speaking assignment. Workers show how clothes and jewelry look when worn, stand in for movie performers, and pose for artists. Stores, motion picture studios, and artists' and photographers' studios employ these workers.

02. SCIENTIFIC

This is an interest in researching and collecting data about the natural world and applying them to problems in medical, life, or physical sciences.

You can satisfy this interest by working with the knowledge and processes involved in the sciences. You may enjoy to research and develop new knowledge in mathematics. Perhaps solving problems in the physical or life sciences would satisfy you. You may prefer to study medicine and help humans or animals. You could work as a practitioner in the health field. You may want to work with scientific equipment and procedures. You could seek a job in research or testing laboratories.

02.01 PHYSICAL SCIENCES

Physical sciences are based on mathematics, physics, and chemistry. Workers in this group research, discover, and test new theories. Some workers research new or improved materials or processes for production and construction. Other workers research such fields as geology, astronomy, oceanography, and computer science. All of the workers' conclusions are based on data that can be measured or proved. Industries, government agencies, or large universities employ most of these workers in their research facilities.

02.02 LIFE SCIENCES

Life sciences are the studies of plants and animals. Workers in this group conduct research and experiments to expand knowledge about living organisms. Workers may try to solve problems related to the effects of the environment on plant and animal life. They may study causes of diseases and methods of control. Hospitals, government agencies, industries, or universities usually employ these workers in their research facilities.

02.03 MEDICAL SCIENCES

Medical sciences involve the prevention, diagnosis, and treatment of human and animal diseases, disorders, or injuries. Some workers in this group specialize in treating specific kinds of illnesses or areas of the body. Doctors, dentists, veterinarians, and other health workers usually work in hospitals or clinics.

02.04 LABORATORY TECHNOLOGY

Laboratory technology involves using special equipment to perform tests in chemistry, biology, or physics. Workers in this group record data obtained from experiments and tests. They help scientists, researchers, and engineers in their work. Hospitals, government agencies, universities, and private industries employ these workers in their research labs.

03. NATURE

This is an interest in activities involving the physical care of plants and animals, usually in an outdoor setting.

You can satisfy this interest by working in farming, forestry, fishing, and related fields. You may like doing physical work outdoors, working on a farm. You may enjoy animals. Perhaps training or taking care of animals would satisfy you. You may prefer to use your management abilities. You could own, operate, or manage farms or related businesses or services.

03.01 MANAGERIAL WORK: NATURE

Managerial work: nature is the managing and directing of work in farming, logging, or forestry. It includes fish and animal breeding, landscaping, and ranching. Some workers in this group own and operate their own farms or related businesses. Private owners, large companies, and the government also employ workers in this group. Managers often do physical work with the people they direct. Job settings include farms, ranches, landscape nurseries, fish hatcheries, and forests.

03.02 GENERAL SUPERVISION: NATURE

General supervision: nature is overseeing several kinds of work in farming, fishing, or forestry. Workers in this group usually work under a general manager. Job settings include farms, ranches, landscape nurseries, fish hatcheries, forests, and fishing boats.

03.03 ANIMAL TRAINING AND CARE

Animal training and care include the feeding and taking care of animals used for various purposes. Animals are trained to entertain or be of service to people. Many dogs, cats, birds, and fish are raised and sold as pets. Wild animals, marine animals, horses, and dogs are trained to perform or to race. Dogs are trained to lead the blind or protect people and property. Small animals are raised for medical research. Animal shelters, zoos, circuses, and pet shops employ workers in this group. Race tracks, medical labs, marine animal shows, and animal training schools also employ these workers.

Veterinarians and jobs related to the caring of farm animals are not included in this group.

03.04 ELEMENTAL WORK: NATURE

Elemental work: nature involves the use of physical strength and energy to do things with your hands. Work in this group of jobs is usually done outside. These jobs are found on farms, fishing boats, or along fishing waters. Workers in this group may also find jobs in forests, parks, gardens, or nurseries.

04. AUTHORITY

This is an interest in using authority to protect people and property.

You can satisfy this interest by working in law enforcement, fire fighting, and related fields. You may enjoy mental challenge and intrigue. You could investigate crimes or fires. You may prefer to fight fires and respond to other emergencies. You may want more routine work. Perhaps a job in guarding or patrolling would satisfy you. You may prefer to use your management ability. You could seek leadership positions in law enforcement and the protective services.

04.01 SAFETY AND LAW ENFORCEMENT

Safety and law enforcement is the enforcing of rules concerning public welfare and safety. Most jobs in this group are in government services. Police departments, fire departments, and similar agencies employ many workers. Businesses offer a few job openings.

04.02 SECURITY SERVICES

Security services keep people and property safe from unlawful acts or from such hazards as fires or accidents. Many jobs in this group are found in government service. Hotels, stores, resorts, and industries may hire workers in this group.

05. MECHANICAL

This is an interest in applying mechanical principles to practical situations, using machines, hand tools, or techniques.

You can satisfy this interest in a variety of work ranging from routine to complex professional jobs. You may enjoy working with ideas about things. You could seek a job in engineering or in a related technical field. You may prefer to deal directly with things. You could find a job in the crafts and trades, building, making, or repairing things. You may like to drive or operate vehicles and special equipment. You may prefer routine or physical work in settings other than factories. Perhaps work in mining or construction would satisfy you.

05.01 ENGINEERING

Engineering is the use of science and mathematics to solve problems in construction, manufacturing, and other industries. Factories, construction companies, mines, oil fields, and research labs employ workers in this group.

05.02 MANAGERIAL WORK: MECHANICAL

Managerial work: mechanical is the directing of technical operations in an industry, utility, or government agency. Jobs in this group are found in such fields as mining, construction, communications, manufacture, transportation, and fuel production.

05.03 ENGINEERING TECHNOLOGY

Engineering technology is the technical detail work required to apply engineering ideas. This work includes surveying, drafting, and engineering technology. It also includes controlling the flow of materials to meet production schedules. Factories, construction companies, architects, engineering firms, and research labs employ workers in this group.

05.04 AIR AND WATER VEHICLE OPERATION

Air and water vehicle operation is the moving of passengers or cargo by plane or ship. The workers included in this group pilot airplanes or ships or supervise others who do. They work for shipping companies and commercial airlines. Companies and people who have their own boats or airplanes also hire these workers. Workers in this group travel to many ports or airports in the world.

05.05 CRAFT TECHNOLOGY

Craft technology is highly skilled custom hand and machine work requiring mastery of a process or technique. Food preparation is also included in this group. Industries such as construction and printing employ workers in this group. Some workers provide mechanical services to people and businesses. Large restaurants hire some of these workers to oversee food preparation.

05.06 SYSTEMS OPERATION

Systems operation is the control and care of equipment in a mechanical system. The system may create and distribute electricity, heat and cool a building, or treat and distribute water. Jobs in this group are found in oil fields, refineries, utility companies, and large buildings.

05.07 QUALITY CONTROL

Quality control is inspecting and checking equipment, materials, and products in settings other than factories. Work may involve measuring or testing raw materials to check whether quality standards are met. Workers in this group are employed in such settings as mines, loading docks, quarries, warehouses, oil fields, and construction sites.

05.08 LAND VEHICLE OPERATION

Land vehicle operators drive freight hauling vehicles or supervise others who do. Railroad companies, trucking firms, and delivery services employ workers in this group. Companies which own and operate freight carriers for their own use also hire these workers. Jobs in this group are scattered throughout the country.

05.09 MATERIALS CONTROL

Materials control is the shipping, receiving, and storing of materials and products. Workers count the products, keep records, and make schedules to control the flow of materials. Firms which make, sell, distribute, or receive large quantities of materials or products employ these workers. Jobs in this group are also found in hospitals and government agencies.

05.10 SKILLED HAND AND MACHINE WORK

Skilled hand and machine work, as used here, is custom work requiring some knowledge of processes and techniques. Food preparation is also included in this group.

The construction and mining industries employ workers in this group in settings other than factories. Firms which repair, install, and maintain products also employ these workers. Hotels and restaurants hire workers who prepare foods.

05.11 EQUIPMENT OPERATION

Equipment operation is the use of machinery for excavating, drilling, paving, mining, hoisting, or dredging.

Jobs in this group are found in mining and construction sites, factories, warehouses, and docks.

05.12 ELEMENTAL WORK: MECHANICAL

Elemental work: mechanical is lifting and carrying materials, tools, and equipment or keeping equipment and work areas clean. Some workers operate simple machines. Workers in this group usually follow instructions and make a few job decisions. Jobs in this group are found in mining, construction, and settings other than factories.

06. INDUSTRIAL

This is an interest in repetitive, concrete, organized activities in a factory setting.

You can satisfy this interest by working in numerous industries which manufacture goods on a mass production basis. You may enjoy manual work, using your hands or hand tools. Perhaps you may prefer to operate or tend machines. You may like to inspect, sort, count, or weigh products. You may prefer to use your training and experience to set up machines or supervise other workers.

06.01 PRODUCTION TECHNOLOGY

Production technology involves a complex knowledge of a product or process to set up and operate production machines. Workers in this group also inspect products thoroughly, do precise hand work, and supervise less skilled workers. Jobs in this group are found in various industries involved in manufacturing and processing.

06.02 PRODUCTION WORK

Production work is hand and machine work requiring skills developed through training and experience. Workers in this group also perform a general inspection of products and supervise production workers. Jobs in this group are found in manufacturing and processing plants.

06.03 PRODUCTION CONTROL

Production control means to regulate the quality of products and materials. Workers in this group inspect, test, weigh, or sort products and materials. Some workers also record data. Jobs in this group are found in manufacturing and processing plants.

06.04 ELEMENTAL WORK: INDUSTRIAL

Elemental work: industrial is routine work requiring little training or experience. Tasks include loading and unloading machines as well as using simple hand tools. Jobs in this group are found in manufacturing and processing plants.

07. BUSINESS DETAIL

This is an interest in activities requiring accuracy and attention to details, primarily in an office setting.

You can satisfy this interest in a wide variety of jobs in which you can attend to the details of a business operation. You may enjoy using your math skills. Perhaps a job in billing, computing, or financial record keeping would satisfy you. You may prefer to deal with people. You would seek a job in which you meet the public, talk on the telephone, or supervise other workers. You may like to operate computer terminals, typewriters, or bookkeeping machines. Perhaps a job in record keeping, filing, or recording would satisfy you. You may prefer to use your training and experience to manage offices and supervise other workers.

07.01 ADMINISTRATIVE DETAIL

Administrative detail is technical clerical work requiring special skills and knowledge. Workers in this group make minor decisions related to office operations. Jobs in this group are found in the offices of businesses, industries, courts, and government agencies. Doctors, lawyers, and other professionals also hire these workers.

07.02 MATHEMATICAL DETAIL

Mathematical detail is clerical work using arithmetic skills to process numerical data related to a business operation. Work involves figuring and keeping records of quantities, costs, and charges. Jobs in this group are found in businesses, industries, and government agencies. Banks, finance companies, and accounting firms hire many of these workers.

07.03 FINANCIAL DETAIL

Financial detail is work requiring math skills as well as an ability to deal with the public. Workers in this group also keep records and supervise the work of others. Jobs in this group are found where money is paid to or received from the public. Banks and other financial institutions also employ workers in this group.

07.04 INFORMATION PROCESSING: SPEAKING

Information processing, as used here, is speaking with people as a main job task. Some workers in this group use telephones, radios, or the telegraph. Businesses, institutions, and government agencies employ most of these workers in their offices.

07.05 INFORMATION PROCESSING: RECORDS

Information processing, as used here, means to compile, review, or maintain records. Workers in this group also schedule workers and check records for accuracy. Jobs in this group are found in most offices, institutions, and government agencies.

07.06 CLERICAL MACHINE OPERATION

Clerical machine operation involves the use of business machines to record or process data. These machines are used to type, sort, compute, send, or receive data. These jobs are found wherever large amounts of data are processed, sent, or received. Businesses, industries, and government agencies employ most of the workers in this group.

07.07 CLERICAL HANDLING

Jobs in this group involve performing clerical duties requiring little specific preparation or skill. These duties are to file, sort, copy, route, or deliver data. Most large businesses, industries, and government agencies employ these workers.

08. PERSUASIVE

This is an interest in influencing others through sales and promotional techniques.

You can satisfy this interest in a wide variety of sales jobs. You may enjoy selling technical products or services. Perhaps you may prefer a selling job which requires less background knowledge. You may enjoy dealing with business and industrial workers. You could seek a job in wholesale sales. You may like to deal with the general public. You could work in stores, sales offices, or in customers' homes. You may prefer to buy and sell products to make a profit.

08.01 SALES TECHNOLOGY

Sales technology is the selling of technical equipment such as industrial machinery. Jobs also include the selling of insurance and services. Some workers in this group buy as well as sell. Wholesale, service, insurance, and other private firms employ workers in this group.

08.02 GENERAL SALES

General sales are the selling of products or services to businesses, industries, or persons. Jobs in this group are found wherever there is contact with people for the purpose of selling. Settings include retail and wholesale stores and businesses.

08.03 VENDING

Vending is the peddling of inexpensive items in public buildings, at public gatherings, or on street corners. Most jobs are found in restaurants, clubs, or sports arenas.

09. ACCOMMODATING

This is an interest in catering to and serving the desires of others, usually on a one-to-one basis.

You can satisfy this interest by providing services for the convenience of others. You may enjoy making others feel at ease by providing hospitality services. You may prefer to improve the appearance of others. Perhaps working in the hair and beauty care field would satisfy you. You may like to provide personal services such as taking tickets, carrying baggage, or ushering.

09.01 HOSPITALITY SERVICES

Hospitality services help people feel at ease and enjoy themselves. These services may involve planning and directing social events or guiding people through museums, cities, or countries. Airline, railroad, ship, and escort companies, as well as resorts and hotels, employ workers in this group. Jobs also can be found in social clubs.

09.02 BARBERING AND BEAUTY SERVICES

Barbering and beauty services are intended to change or improve personal appearance. Barbering service includes haircuts, facial massages, scalp treatments, and shaves. Beauty service includes the care of skin and hair. Barber and beauty shops employ workers in this group. Some workers own and operate their own businesses.

09.03 PASSENGER SERVICES

Passenger services are the transporting of people by bus, taxi, limousine, or other vehicle. The workers included in this group drive such vehicles or instruct and supervise those who do. Taxi, bus, or street railway companies hire most workers in this group. Some workers are employed by hospitals. Others work for branches of local government, such as public schools.

09.04 CUSTOMER SERVICES

Customer services involve providing people with various services in commercial settings. Tasks usually include receiving payment and making change for the services rendered. Hotels, restaurants, resorts, and stores employ workers in this group. Some of these jobs are found on board trains, airplanes, and ships.

09.05 ATTENDANT SERVICES

Attendant services are tasks performed for the comfort and convenience of other people. Attendant services take place in a variety of public and private settings. These settings include hotels, restaurants, athletic clubs, gambling casinos, reducing salons, and private homes. Airports, theaters, and sports arenas may employ these workers.

10. HUMANITARIAN

This is an interest in helping individuals with their mental, spiritual, social, physical, or vocational concerns.

You can satisfy this interest through jobs in which a concern for the welfare of others is important. Perhaps the spiritual or mental well-being of others concerns you. You could seek a job in religion or counseling. You may prefer to help others with physical problems. You could work in the nursing, therapy, or rehabilitation field. You may like to provide needed but less difficult care by working as an aide, orderly, or technician.

10.01 SOCIAL SERVICES

Social services help people, either one person at a time or in groups. Workers in this group help people solve both day-to-day and special problems. These problems may be related to a person's social, personal, vocational, educational, or religious development. Churches, schools, guidance centers, and mental clinics employ these workers. Agencies such as welfare, employment, vocational rehabilitation, and juvenile court also offer jobs in this group.

10.02 NURSING AND THERAPY SERVICES

Nursing and therapy services involve caring for and treating people to promote their physical and emotional well-being. Most workers in this group are concerned with ill and injured people. They also care for and treat people with physical handicaps. Some workers train or supervise others engaged in the care and treatment of patients. Hospitals, nursing homes, and rehabilitation centers hire workers in this group. Schools, industrial plants, doctors' offices, and private homes also offer these jobs.

10.03 CHILD AND ADULT CARE

Child and adult care involves assisting in the physical care or welfare of others. Some workers assist in the care and treatment of the sick, injured, or physically handicapped. Other workers mainly care for young children or the elderly. Hospitals, clinics, day care centers, and nursery schools hire workers in this group. Treatment centers for the handicapped and private homes also provide jobs in this group.

11. SOCIAL-BUSINESS

This is an interest in leading and influencing others through activities involving verbal or numerical abilities.

You can satisfy this interest through study and work in a wide variety of professional fields. You may enjoy the challenge and responsibility of leadership. You could seek work in administration or management. You may prefer to work with technical details. You could find a job in finance, law, social research, or public relations. You may like to help others learn. Perhaps working in education would satisfy you.

11.01 MATHEMATICS AND STATISTICS

Mathematics and statistics involve working with numerical data and computer systems. Workers in this group apply theories in mathematics to solve problems or conduct research. Colleges, firms, and government agencies which use computers or conduct statistical research employ these workers.

11.02 EDUCATIONAL AND LIBRARY SERVICES

Educational and library services include teaching, counseling, and library work. Job settings are schools, colleges, libraries, and other educational agencies.

11.03 SOCIAL RESEARCH

Social research is the study and analysis of information about people and societies. This work may include researching past events and cultures or studying and solving current social problems. Museums, schools and colleges, government agencies, and private research foundations employ workers in this group.

11.04 LAW

Law, as used here, involves applying the knowledge of laws to advise people and businesses on their rights and obligations. Workers in this group define the meaning of laws to use it in courts of law, hearings, and business activities. Law firms, government agencies, private businesses employ these workers. Some workers may be self-employed and have their own practice. Others may be elected or appointed to public offices.

11.05 BUSINESS ADMINISTRATION

Business administration is the management of a public agency or private business. Workers in this group develop operating procedures, analyze problems, and supervise workers. Businesses, industries, government agencies, unions, and professional groups employ these workers.

11.06 FINANCE

Finance involves the design and control of financial records and the analysis of financial data. Workers in this group check financial record keeping systems for accuracy and supervise the work of others. Banks, loan companies, and investment firms employ these workers. Businesses, industries, colleges, and government agencies also hire these workers for their financial services.

11.07 SERVICES ADMINISTRATION

Services administration is the management of agencies which provide health, welfare, education, or recreation services. Workers in this group usually supervise others who carry out the functions of a specific service. Schools, colleges, hospitals, prisons, community programs, and government agencies employ these workers.

11.08 COMMUNICATIONS

Communications include the writing, editing, and translating of nonfictional information. Some workers also read news reports on radio or television.

Newspapers, publishing firms, and radio and television stations employ these workers. Businesses, government agencies, and professional groups usually provide some openings.

11.09 PROMOTION

Promotion involves advertising products or services, raising money, or influencing the opinions of others. Some workers in this group deal directly with the public. Advertising agencies, businesses and industries, colleges, unions, professional groups, and government agencies employ these workers.

11.10 REGULATIONS ENFORCEMENT

Regulations enforcement is the enforcing of laws about finance, people's rights, health and safety, and similar matters. However, workers in this group are not part of a police force. These workers examine procedures, products, and services to assure that government regulations are followed. Most jobs in this group are found in government agencies. Businesses also hire workers in this group to enforce company policies.

11.11 BUSINESS MANAGEMENT

Business management means to direct the activities of a company or a store. Workers in this group carry out operating policies and procedures and supervise others. All types of businesses employ these workers. These businesses include hotels, recreation centers, and stores as well as transportation and service companies. Some government agencies also hire these workers.

11.12 CONTRACTS AND CLAIMS

Contracts and claims include negotiating contracts and investigating claims for companies and people. Workers who negotiate contracts set up legally binding agreements between buyers and sellers of services, materials, or products. Workers who investigate claims gather information to determine the validity of claims. Claims involve such things as property damage or personal injury. Insurance companies, booking agencies, industries, businesses, and government agencies employ workers in this group.

12. PHYSICAL PERFORMING

This is an interest in physical activities performed before an audience.

You can satisfy this interest through jobs in athletics, sports, and the performance of physical feats. You may enjoy sports. Perhaps a job as a professional player or official would satisfy you. You may prefer to develop and perform special acts such as acrobatics or wire walking.

12.01 SPORTS

Sports include competing in professional athletic or sporting events, coaching players and officiating games. Jobs in this group are found in all types of sports. These sports include horse racing, hockey, football, baseball, basketball, golf, and track.

12.02 PHYSICAL FEATS

Physical feats, as used here, are acts of special physical strength or skill which entertain people. Workers in this group may perform alone. Circuses, carnivals, and theaters hire these workers. Booking agents often arrange performances and special events.

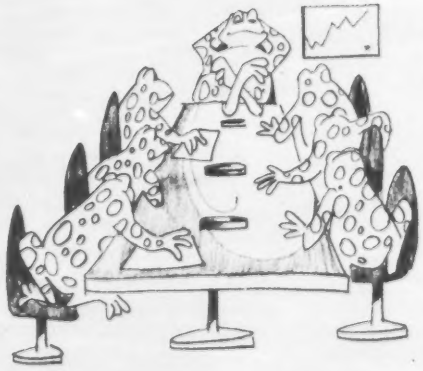
Work Activity Descriptions

Everyone prefers certain types of activities. These may be leisure time activities or tasks a person does as part of his or her job. A person's preferences can be used to better understand the world of work. To explore occupations in terms of your likes and dislikes can help you in your career decision-making. If you work in an occupation involving activities you enjoy, you are more likely to be satisfied.

All the tasks performed by workers in any occupation can be grouped into ten types of work activities. You probably have had experiences doing these types of activities in both work and leisure settings. As you read the following titles and descriptions of the ten types of work activities, try to relate them to your experiences.

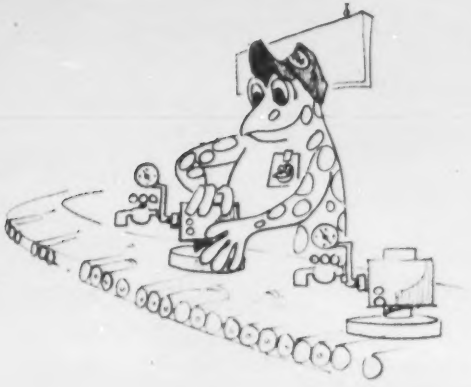
1. ACTIVITIES DEALING WITH THINGS AND OBJECTS.

Workers do physical work with materials and products. They often use instruments, tools, machines, or vehicles. They may lift, pull, and push. They may do more complex tasks such as adjusting and controlling things. Also, workers may use knowledge and reasoning skills to make judgments and decisions.



2. ACTIVITIES INVOLVING BUSINESS CONTACT.

Workers deal with others in various situations. They set up business contacts to sell, buy, talk, listen, promote, and bargain. To follow through, workers gather, exchange, or present ideas and facts about the products or services.



3. ACTIVITIES OF A ROUTINE, DEFINITE, ORGANIZED NATURE.

Workers usually repeat the same task many times. These tasks can often be done in a short time. Workers are usually organized to get the most work done in the least time. In general, assignments and methods are set up in advance. The worker seldom makes decisions about the work.

4. ACTIVITIES INVOLVING DIRECT PERSONAL CONTACT TO HELP OR INSTRUCT OTHERS.

Workers help to maintain or improve the physical, mental, emotional, or spiritual well-being of others. Workers need to speak and listen well. They may communicate simple ideas. They may also deal with complex principles of human growth to teach, train, or help others. Some workers may care for or train animals.

5. ACTIVITIES RESULTING IN RECOGNITION OR APPRECIATION FROM OTHERS.

Workers may lead, plan, control, or manage the work of others. Some workers may be involved in acting, sports, art, or music. As a result, they gain prestige, recognition, or appreciation from others. In most cases, workers are involved at a high level with data and people.

6. ACTIVITIES INVOLVING THE COMMUNICATION OF IDEAS AND INFORMATION.

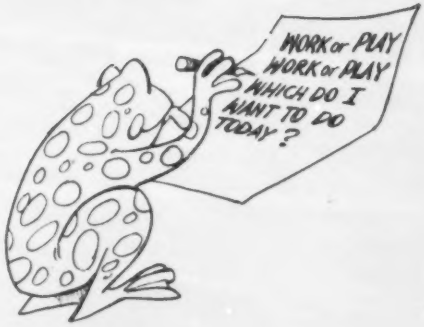
Workers present ideas and information to others through writing, acting, music, or designing. They may inform others through radio or television. Workers may also be in direct contact with the people they inform.

7. ACTIVITIES OF A SCIENTIFIC AND TECHNICAL NATURE.

Workers may conduct research and analysis, evaluate, explain, and record scientific information. They may use scientific or technical methods, instruments, and equipment in their work.

8. ACTIVITIES INVOLVING CREATIVE THINKING.

Workers use complex mental skills to create new knowledge or new ways to apply what is already known. They may solve difficult problems or design projects and methods. Workers may use new ways to express ideas, feelings, and moods. They may also use imagination to create ideas and objects.



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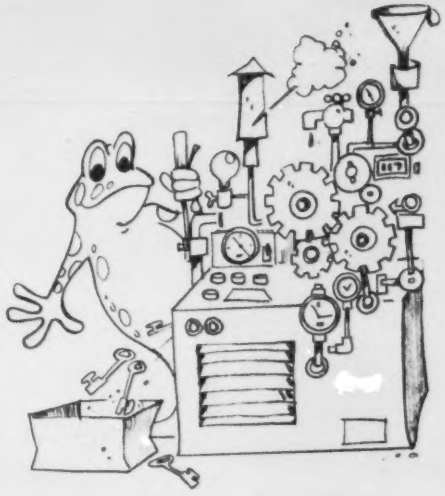
9. ACTIVITIES INVOLVING PROCESSES, METHODS, OR MACHINES.

Workers may plan, schedule, process, control, direct, and evaluate data and things. There may be contact with people, but dealing with people is not important to the work.



10. ACTIVITIES INVOLVING WORKING ON OR PRODUCING THINGS.

Workers use physical skills to work on or make products. Often tools, machines, or measuring devices are used to make or change a product. Workers may build, repair, alter, or restore products.

Work Activity — Worker Trait Group Index

The following is a list of the ten types of work activities and the Worker Trait Group numbers of those groups relating to each activity.

1. **Activities Dealing with Things and Objects**
   01.06, 02.01, 02.02, 02.04, 03.01, 03.04, 05.01, 05.03, 05.04, 05.05, 05.06, 05.07, 05.08, 05.09, 05.10, 05.11, 05.12, 06.01, 06.02, 06.03, 06.04, 07.02, 07.03, 07.06, 07.07, 09.04, 11.06

2. **Activities Involving Business Contact**
   01.07, 03.01, 04.01, 04.02, 05.01, 05.02, 05.09, 07.01, 07.02, 07.03, 07.04, 07.05, 08.01, 08.02, 08.03, 09.01, 09.02, 09.03, 09.04, 09.05, 10.03, 11.02, 11.04, 11.05, 11.06, 11.07, 11.08, 11.09, 11.10, 11.11, 11.12

3. **Activities of a Routine, Definite, Organized Nature**
   01.08, 03.03, 03.04, 04.02, 05.07, 05.08, 05.09, 05.10, 05.11, 05.12, 06.02, 06.03, 06.04, 07.02, 07.03, 07.04, 07.05, 07.06, 07.07, 08.03, 09.03, 09.04, 09.05, 10.03

4. **Activities Involving Direct Personal Contact to Help or Instruct Others**
   02.03, 03.03, 10.01, 10.02, 10.03, 11.02, 11.07

5. **Activities Resulting in Recognition or Appreciation from Others**
   01.01, 01.03, 01.04, 01.05, 02.03, 03.02, 04.01, 05.02, 05.04, 07.01, 08.01, 09.01, 10.01, 11.02, 11.04, 11.05, 11.06, 11.07, 11.08, 11.09, 11.11, 11.12, 12.01, 12.02

6. **Activities Involving the Communication of Ideas and Information**
   01.01, 01.02, 01.03, 01.04, 01.05, 01.07, 01.08, 02.01, 02.02, 03.03, 04.01, 04.02, 05.01, 05.02, 07.01, 07.04, 07.05, 08.01, 08.02, 09.01, 10.01, 10.02, 11.01, 11.02, 11.03, 11.04, 11.05, 11.06, 11.07, 11.08, 11.09, 11.10, 11.12

7. **Activities of a Scientific and Technical Nature**
   02.01, 02.02, 02.03, 02.04, 03.01, 05.01, 05.02, 05.03, 08.01, 10.02, 11.01, 11.03, 11.06

8. **Activities Involving Creative Thinking**
   01.01, 01.02, 01.03, 01.04, 01.05, 02.01, 02.02, 05.01, 09.02, 10.01, 11.03, 11.04

9. **Activities Involving Processes, Methods, or Machines**
   01.06, 02.04, 03.01, 03.02, 03.04, 05.01, 05.02, 05.03, 05.04, 05.05, 05.06, 05.07, 05.08, 05.09, 05.10, 05.11, 05.12, 06.01, 06.02, 06.03, 06.04, 07.02, 07.04, 07.06, 09.02, 09.03, 11.01, 11.06, 12.02

10. **Activities Involving Working on or Producing Things**
    01.06, 03.01, 05.05, 05.10, 06.01, 06.02, 06.03, 06.04

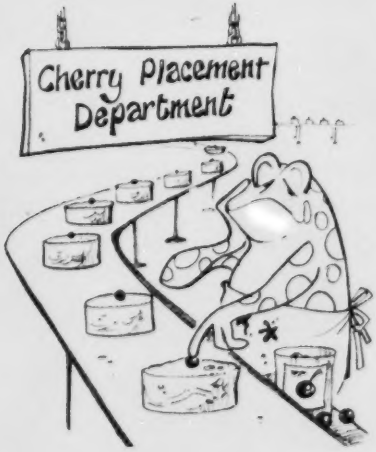
Work Situation Descriptions

An important part of finding satisfying work is learning what kinds of work situations you like and which you want to avoid. People differ in their willingness and/or ability to adapt to the demands of various situations. There is a great variety of demands made upon workers. However, these demands can be grouped into ten types of situations.

You probably have had experiences with these situations in both work and leisure settings. As you read the following titles and descriptions of the ten types of work situations, try to relate them to your experiences.

1. PERFORMING DUTIES WHICH CHANGE FREQUENTLY.

Workers perform a variety of duties, often changing from one task to another. The variety of duties requires workers to use different skills, knowledge, and abilities. They may need to use different methods or materials. They may also have to change work locations. In changing tasks, workers must be efficient and remain calm.



2. PERFORMING ROUTINE TASKS.

Workers do the same tasks over and over. They may not change the tasks or the order in which they do them. Work assignments are of short duration and follow a required method or sequence. Very little judgment is required.

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3. PLANNING AND DIRECTING AN ENTIRE ACTIVITY.

Workers plan, direct, or control an entire activity, project, or program. As leaders, they coordinate, supervise, and are responsible for the work of others. They make decisions and keep up-to-date on new information about their work.

4. DEALING WITH PEOPLE.

Workers deal directly with other people. They must interact with people at a higher level than giving or taking instructions. Workers must be pleasant and helpful in their contacts with people.

5. INFLUENCING PEOPLE'S OPINIONS, ATTITUDES, AND JUDGMENTS.

Workers influence people by changing their thinking and behavior. Workers must be able to understand people and communicate with them. They influence how people feel about a product, a service, or other people. This influence is achieved by providing new information or ideas in a direct or indirect way.

6. WORKING UNDER PRESSURE.

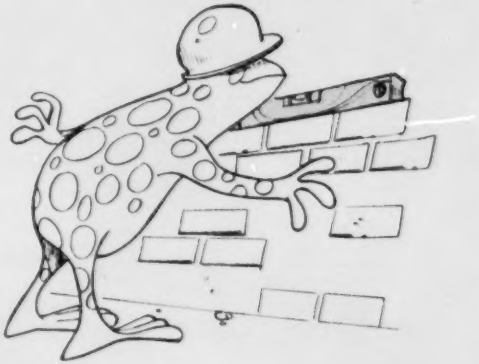
Workers deal with situations involving potential danger and risk. Workers must maintain self-control and take decisive action in unexpected or critical situations. They may also be involved with tasks where speed and close attention to detail create pressure.

7. MAKING DECISIONS USING PERSONAL JUDGMENT.

Workers use personal judgment and the five physical senses to make decisions. No standard or right answers exist upon which to base the decisions. They are based upon the training, experience, or aesthetic values of the workers.

8. MAKING DECISIONS USING STANDARDS THAT CAN BE MEASURED OR CHECKED.

Workers make decisions based upon information or standards that can be measured or checked. Facts and set procedures are used rather than personal judgment.

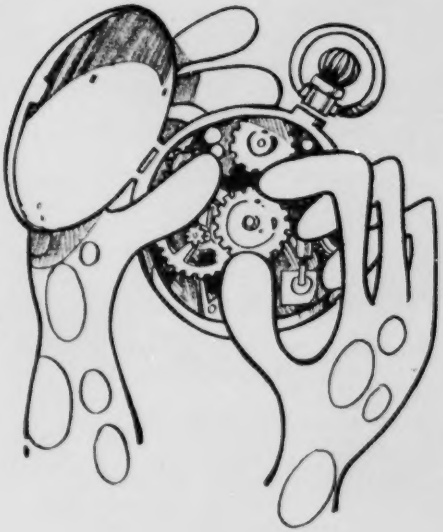


9. INTERPRETING AND EXPRESSING FEELINGS, IDEAS, OR FACTS.

Workers use creative thinking to interpret and express feelings, ideas, or facts. Some workers focus on the process they use to communicate, such as speaking, singing, or acting. Others communicate through products, such as photographs, designs, songs, or paintings.

10. WORKING WITHIN PRECISE LIMITS OR STANDARDS OF ACCURACY.

Workers must pay strict attention to details. Tasks must be completed with accuracy within exact standards or time limits. The quality of the product or service is directly related to the performance of the workers.



Work Situation — Worker Trait Group Index

The following is a list of the ten types of work situations and the Worker Trait Group numbers of those groups relating to each situation.

1. **Performing Duties Which Change Frequently**
   03.01, 03.02, 03.03, 03.04, 04.01, 05.01, 05.02, 05.05, 05.06, 07.01, 07.04, 09.01, 09.02, 10.01, 10.02, 10.03, 11.02, 11.03, 11.04, 11.05, 11.07, 11.08, 11.09, 11.10, 11.11, 11.12

2. **Performing Routine Tasks**
   03.04, 06.02, 06.03, 06.04, 07.02, 07.06

3. **Planning and Directing an Entire Activity**
   01.01, 01.02, 01.03, 01.04, 01.05, 03.01, 03.02, 04.01, 05.02, 05.04, 05.06, 06.01, 06.02, 09.01, 10.01, 11.01, 11.02, 11.05, 11.07, 11.08, 11.09, 11.10, 11.11, 11.12

4. **Dealing with People**
   01.01, 01.02, 01.03, 01.04, 01.05, 01.07, 01.08, 02.03, 03.01, 03.02, 03.03, 04.01, 04.02, 05.01, 05.02, 05.04, 05.09, 06.01, 06.02, 07.01, 07.03, 07.04, 07.05, 07.06, 08.01, 08.02, 08.03, 09.01, 09.02, 09.03, 09.04, 09.05, 10.01, 10.02, 10.03, 11.02, 11.03, 11.04, 11.05, 11.06, 11.07, 11.08, 11.09, 11.10, 11.11, 11.12, 12.01

5. **Influencing People's Opinions, Attitudes, and Judgments**
   01.01, 01.07, 08.01, 08.02, 08.03, 11.09, 12.01

6. **Working Under Pressure**
   04.01, 04.02, 05.04, 12.01, 12.02

7. **Making Decisions Using Personal Judgment**
   01.01, 01.02, 01.03, 01.04, 01.05, 01.06, 01.07, 02.01, 02.02, 02.03, 03.01, 03.02, 03.03, 04.01, 04.02, 05.01, 05.02, 05.03, 05.04, 05.05, 05.07, 07.01, 08.01, 08.02, 09.01, 09.02, 09.03, 10.01, 10.02, 10.03, 11.01, 11.02, 11.03, 11.04, 11.05, 11.06, 11.07, 11.08, 11.09, 11.10, 11.11, 11.12, 12.01, 12.02

8. **Making Decisions Using Standards That Can Be Measured or Checked**
   01.06, 02.01, 02.02, 02.03, 02.04, 03.01, 03.02, 03.03, 05.01, 05.02, 05.03, 05.04, 05.05, 05.06, 05.07, 05.08, 05.09, 05.10, 05.11, 05.12, 06.01, 06.02, 06.03, 07.01, 07.02, 07.03, 07.04, 07.05, 07.06, 07.07, 08.01, 08.02, 09.02, 09.03, 10.02, 10.03, 11.01, 11.03, 11.04, 11.05, 11.06, 11.08, 11.10, 11.11, 11.12, 12.01

9. **Interpreting and Expressing Feelings, Ideas, or Facts**
   01.01, 01.02, 01.03, 01.04, 01.05, 01.07, 01.08

10. **Working Within Precise Limits or Standards of Accuracy**
    01.06, 02.03, 02.04, 05.03, 05.04, 05.05, 05.06, 05.07, 05.09, 05,10, 05.11, 05.12, 06.01, 06.02, 06.03, 06.04, 07.02, 07.03, 07.05, 07.06, 07.07, 09.02, 10.02, 10.03

School Subjects

One way to identify occupations for exploration is through interests and abilities in school subjects. In order to relate what you like and do well in school to what you might like to do in occupations, you must be able to link the two. The purpose of the School Subject - Worker Trait Group Chart is to help you **quickly** identify school subjects or Worker Trait Groups that are related. The information on the chart is **general.** The chart does not identify the **specific degree** of relationship. **All** of the occupations in a Worker Trait Group do not necessarily relate to a school subject.

On each side of the chart there is a listing of 56 school subjects. These are grouped into general subject areas such as language, math, and science. Although the titles of the subjects may not be exactly the same as the titles of the courses offered in your school, they can be easily related to your school's courses.

Across the top of the chart, the Worker Trait Group titles and numbers are listed under the Career Area to which they belong. You can read brief descriptions of the Worker Trait Groups in Appendix B of this text. Use the **Worker Trait Group Guide** to obtain full descriptions of the Worker Trait Groups.

There are 56 rows of subjects and 66 columns of Worker Trait Groups. The rows and columns cross to form a cell linking each subject with each Worker Trait Group. If a subject and a Worker Trait Group are related, the codes A or B appear in the cell.

Directions

1. To identify the Worker Trait Groups related to subjects you prefer, follow the **rows** of your chosen subjects **across** the chart. The codes A or B appear in the columns of the Worker Trait Groups related to the subjects.
2. To identify the subjects related to the Worker Trait Groups which interest you, follow the **columns** of your chosen Worker Trait Groups **down** the chart. The codes A or B appear in the rows of the subjects related to the Worker Trait Groups.

Code Definitions

Code A. The subject and the Worker Trait Group are **directly** related. The content, knowledge, and skills taught in the subject are **essential** to workers in the group of occupations.

Code B. The subject and the Worker Trait Group are **indirectly** related. The knowledge and skills taught in the subject are **helpful** to workers in this group of occupations.

SCHOOL SUBJECT – WORKER TRAIT GROUP CHART

DIRECTIONS

1. To identify the Worker Trait Groups related to subjects you prefer, follow the **rows** of your chosen subjects **across** the chart. The codes A or B appear in the columns of the Worker Trait Groups related to the subjects.

2. To identify the subjects related to the Worker Trait Groups which interest you, follow the **columns** of your chosen Worker Trait Groups **down** the chart. The codes A or B appear in the rows of the subjects related to the Worker Trait Groups.

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Charleston, West Virginia

SCHOOL SUBJECTS

			01 ARTISTIC								02 SCIENTIFIC				03 NATURE			04 AUTHORITY		05 MECHANICAL										06 INDUSTRIAL			
			01.01 Literary Arts	01.02 Visual Arts	01.03 Performing Arts: Drama	01.04 Performing Arts: Music	01.05 Performing Arts: Dance	01.06 Technical Arts	01.07 Amusement	01.08 Modeling	02.01 Physical Sciences	02.02 Life Sciences	02.03 Medical Sciences	02.04 Laboratory Technology	03.01 Managerial Work: Nature	03.02 General Supervision: Nature	03.03 Animal Training and Care	03.04 Elemental Work: Nature	04.01 Safety and Law Enforcement	04.02 Security Services	05.01 Engineering	05.02 Managerial Work: Mechanical	05.03 Engineering Technology	05.04 Air and Water Vehicle Operation	05.05 Craft Technology	05.06 Systems Operation	05.07 Quality Control	05.08 Land Vehicle Operation	05.09 Materials Control	05.10 Skilled Hand and Machine Work	05.11 Equipment Operation	05.12 Elemental Work: Mechanical	06.01 Production Technology	06.02 Production Work	06.03 Production Control	06.04 Elemental Work: Industrial
ACADEMIC	Language	1 Language Skills	A																B															
		2 Literature	B																															
		3 Composition	A																															
		4 Speech			B																													
		5 Foreign Languages																																
	Math	6 Basic Math Skills													B						B			B	B	3	B	B	B		B	B	B	
		7 Algebra / Geometry									B			B						A		B												
		8 Advanced Math									B	B	B	B						A		B	B											
	Science	9 Biological Sciences										A	A	B	B																			
		10 Chemistry									B	B	B	A						A														
		11 Physics									A		B	B						A		B	B											
		12 Earth / Space Sciences									A																							
	Social Studies	13 History																																
		14 Government																	B															
		15 Sociology																	B															
		16 Geography									B												B											
	Health and Physical Education	17 Health										B	B																					
		18 Physical Education					B			B									B	B														
	Art	19 Studio Arts and Crafts		A				B																										
		20 Drama			A																													
		21 Music				A																												
	Industrial Arts	22 Manufacturing		B				B													B	B	B		B					B	B	B	B	B
		23 Product Services																			B	B			B					B		B		
		24 Transportation																			B		B	B	B			B			B	B		
		25 Construction																			B		B		B						B			
		26 Communications		B																	B	B	B		B					B		B		
		27 Energy / Power Systems																			B				B	B				B	B	B		
	Home Economics	28 Consumer and Homemaking							B				B												B					B	B			B
		29 Child Care																																
		30 Food Management																							A					A				
		31 Clothing, Textiles, Home Furnishings						A																	A							A		A
		32 Institutional & Home Management																													A			
	Agriculture	33 Agricultural Production										A			A	A	A	A																
		34 Agricultural Services													A	A		A																
		35 Mechanics														A		A							A					A				
	Distributive Education	36 General Merchandising & Marketing		A																														
		37 Services																																
		38 Finances																																
	Health	39 Medical-Dental Technology												A											A									
		40 Nursing Care																																
	Office	41 Accounting																																
		42 General Clerical																											A		A			
		43 Secretarial & Typing																																
		44 Data Processing																																
	Technical and Industrial	45 Air Conditioning & Refrigeration																							A									
		46 Appliance Repair / Small Engine Repair																							A					A				
		47 Automotive Services and Diesel																							A					A				
		48 Commercial Art / Photography / Graphic Art		A				A																	A					A				
		49 Construction and Maintenance																							A					A	A			
		50 Drafting																				A												
		51 Electrical / Electronic																							A	A				A		A		
		52 Metalworking																							A					A	A	A	A	A
		53 Personal Services																																
		54 Quantity Food																							A					A	A		A	
		55 Textile / Leather / Upholstering																							A							A	A	A
		56 Woodworking																							A					A		A		

VOCATIONAL

SCHOOL SUBJECT – WORKER TRAIT GROUP CHART

CODE DEFINITIONS

Code A. The subject and the Worker Trait Group are **directly** related. The content, knowledge, and skills taught in the subject are **essential** to workers in the group of occupations.

Code B. The subject and the Worker Trait Group are **indirectly** related. The knowledge and skills taught in the subject are **helpful** to workers in this group of occupations.

07 BUSINESS DETAIL								08 PERSUASIVE			09 ACCOMMODATING				10 HUMANITARIAN			11 SOCIAL – BUSINESS										12 PHYSICAL PERFORMING		SCHOOL SUBJECTS		
07 01 Administrative Detail	07 02 Mathematical Detail	07 03 Financial Detail	07 04 Information Processing-Speaking	07 05 Information Processing-Records	07 06 Clerical Machine Operation	07 07 Clerical Handling	08 01 Sales Technology	08 02 General Sales	08 03 Vending	09 01 Hospitality Services	09 02 Barbering and Beauty Services	09 03 Passenger Services	09 04 Customer Services	09 05 Attendant Services	10 01 Social Services	10 02 Nursing and Therapy Services	10 03 Child and Adult Care	11 01 Mathematics and Statistics	11 02 Educational and Library Services	11 03 Social Research	11 04 Law	11 05 Business Administration	11 06 Finance	11 07 Services Administration	11 08 Communications	11 09 Promotion	11 10 Regulations Enforcement	11 11 Business Management	11 12 Contracts and Claims	12 01 Sports	12 02 Physical Feats			
B			B	B			B	B		B					B			A	B	B	B		B	A	B	B	B				1 Language Skills	Language	ACADEMIC
																		A													2 Literature		
																		A	B					B	A						3 Composition		
															A			A			A	B		B		B					4 Speech		
																		A							A						5 Foreign Languages		
B	A	B	B	B	B		B	B					B					A			B	A	B			B	B	B			6 Basic Math Skills	Math	
																		A	A												7 Algebra / Geometry		
																		A	A												8 Advanced Math		
															A			A													9 Biological Sciences	Science	
															B			A													10 Chemistry		
																		A													11 Physics		
																		A													12 Earth / Space Sciences		
																		A	A	B											13 History	Social Studies	
																		A	A	B	B						B				14 Government		
															A	B		A	A	B	B		A				B				15 Sociology		
																		A													16 Geography		
															B	B	B	A					B								17 Health	Health and Physical Education	
																		A											A	A	18 Physical Education		
																		A													19 Studio Arts and Crafts	Art	
																		A													20 Drama		
																		A													21 Music		
																		A													22 Manufacturing	Industrial Arts	
																		A													23 Product Services		
												B						A													24 Transportation		
																		A													25 Construction		
						B												A													26 Communications		
																		A													27 Energy / Power Systems		
								3		B			B	B	B	B	B	A													28 Consumer and Homemaking	Home Economics	
																A		A													29 Child Care		
										A			A	A				A									A				30 Food Management		
																		A													31 Clothing, Textiles, Home Furnishings		
										A						A		A													32 Institutional & Home Management		
																		A													33 Agricultural Production	Agriculture	
																		A						A							34 Agricultural Services		
																		A													35 Mechanics		
		A					A	A					A					A			A					A		A			36 General Merchandising & Marketing	Distributive Education	
		A	A				A	A					A	A				A									A				37 Services		
A	A						A											A				A						A			38 Finances		
																A		A													39 Medical-Dental Technology	Health	
															A	A		A													40 Nursing Care		
	A	A				A												A				A									41 Accounting	Office	
A	A		A	A		A												A													42 General Clerical		
A				A	A													A													43 Secretarial & Typing		
					A													A													44 Data Processing		
																		A													45 Air Conditioning & Refrigeration	Technical and Industrial	
																		A													46 Appliance Repair / Small Engine Repair		
																		A													47 Automotive Services and Diesel		
																		A													48 Commercial Art / Photography / Graphic Art		
																		A													49 Construction and Maintenance		
																		A													50 Drafting		
																		A													51 Electrical / Electronic		
																		A													52 Metalworking		
											A			A				A													53 Personal Services		
										A			A	A				A									A				54 Quantity Food		
																		A													55 Textile / Leather / Upholstering		
																		A													56 Woodworking		

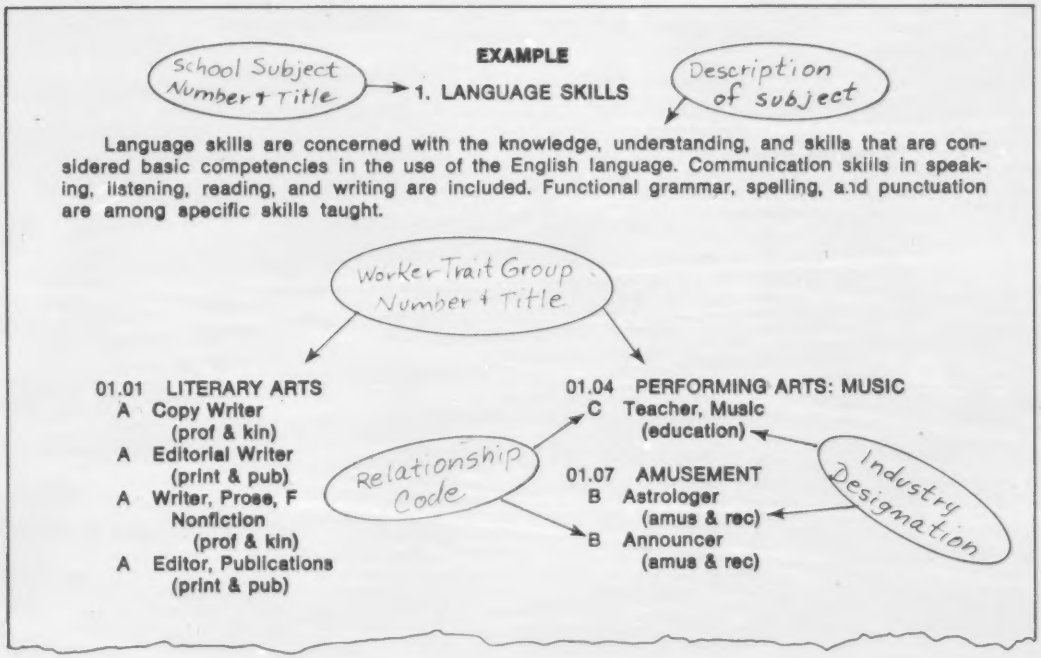
You can get more **specific** information about how subjects relate to occupations in the **School Subject — Occupation Index.**

The index links over 2800 occupations with the 56 school subjects. These occupations represent the major national employment opportunities. Occupations found in common occupational information resources are also included in the index. The index has the following three parts:

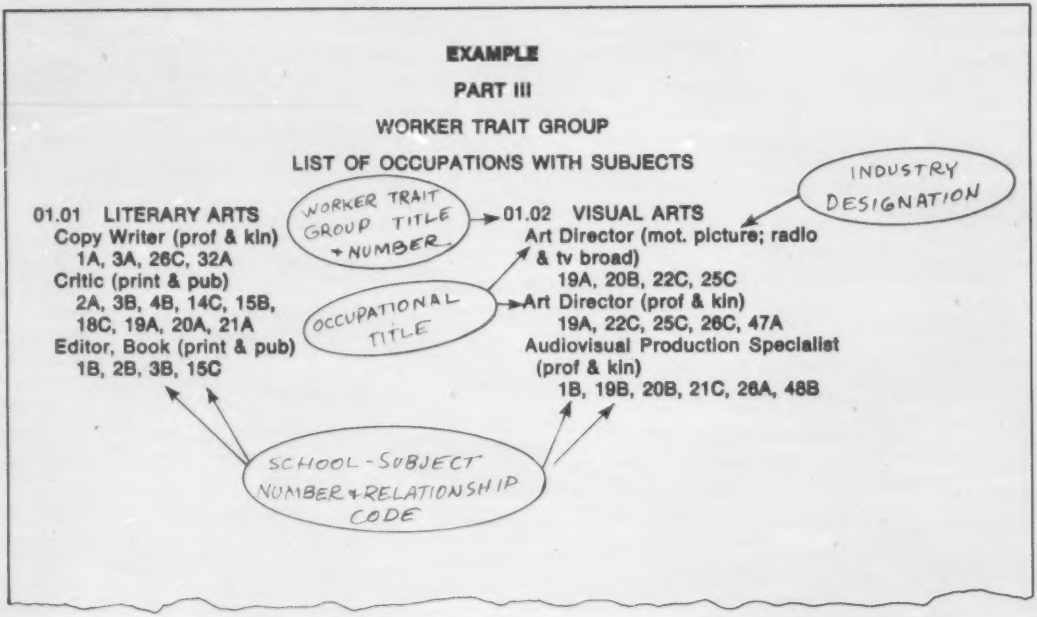
Part I. Part 1 contains a reduced copy of the School Subject — Worker Trait Group Chart. Since the chart and index may be used together, you may wish to refer to the chart while using the index.

Part II. This part has a section for each of the 56 subjects. Each section describes the subject, lists the related occupations by Worker Trait Groups, and identifies the specific subject and occupation relationship. On the chart, codes A or B are used to identify the relationship between school subjects and Worker Trait Groups. The index uses codes A, B, and C. Code A represents a **direct** and **necessary** relationship. Code B represents an **indirect** and **necessary** relationship. Code C represents an **indirect** and **helpful** relationship.

The following example illustrates the information contained in Part II.


EXAMPLE
School Subject Number + Title
1. LANGUAGE SKILLS
Description of subject
Language skills are concerned with the knowledge, understanding, and skills that are considered basic competencies in the use of the English language. Communication skills in speaking, listening, reading, and writing are included. Functional grammar, spelling, and punctuation are among specific skills taught.
Worker Trait Group Number + Title
01.01 LITERARY ARTS
A Copy Writer (prof & kin)
A Editorial Writer (print & pub)
A Writer, Prose, F Nonfiction (prof & kin)
A Editor, Publications (print & pub)
01.04 PERFORMING ARTS: MUSIC
C Teacher, Music (education)
01.07 AMUSEMENT
B Astrologer (amus & rec)
B Announcer (amus & rec)
Relationship Code
Industry Designation

Part III. This part contains a listing of the Worker Trait Groups. The occupations related to each of the Worker Trait Groups are listed in alphabetical order. Under the title of each occupation is a listing of the school subject numbers related to the occupation. With each number, the code A, B, or C shows the type relationship the occupation has with the school subject. The following example illustrates the information contained in Part III.


EXAMPLE
PART III
WORKER TRAIT GROUP
LIST OF OCCUPATIONS WITH SUBJECTS
INDUSTRY DESIGNATION
WORKER TRAIT GROUP TITLE + NUMBER
OCCUPATIONAL TITLE
01.01 LITERARY ARTS
Copy Writer (prof & kin)
1A, 3A, 26C, 32A
Critic (print & pub)
2A, 3B, 4B, 14C, 15B, 18C, 19A, 20A, 21A
Editor, Book (print & pub)
1B, 2B, 3B, 15C
01.02 VISUAL ARTS
Art Director (mot. picture; radio & tv broad)
19A, 20B, 22C, 25C
Art Director (prof & kin)
19A, 22C, 25C, 26C, 47A
Audiovisual Production Specialist (prof & kin)
1B, 19B, 20B, 21C, 28A, 48B
SCHOOL-SUBJECT NUMBER & RELATIONSHIP CODE

Specific instructions on how to use the **School Subject — Occupation Index** are located in the front of the index. The first time you use the index you should read these instructions.

Aptitudes

Aptitude is the quickness or ease with which you can learn. There are different kinds of aptitudes. Some aptitudes can help you understand a novel or solve math problems. Others can help you do very fine work with your hands and fingers. Some other aptitudes can help you do tasks requiring fast and accurate body movements. Some aptitudes can help you see differences in size or shape.

The U. S. Department of Labor job analysts have defined eleven different aptitudes. These aptitudes have been related to the Worker Trait Groups. The aptitudes and levels of aptitudes related to average successful performance in each Worker Trait Group have been identified.

Knowing as much as possible about your own aptitudes can help you in career exploration and planning. You can estimate your own levels of aptitudes and compare your estimates with the aptitudes related to the Worker Trait Groups.

Read the following information on each of the aptitudes. Use the clues to guide and help you make your estimates. Consider and estimate each aptitude carefully, one at a time. Compare yourself with others your age rather than with adults. The clues are examples, so try to think of other similar experiences you have had which might indicate the level of your aptitude. Choose the level which represents your **highest** self-estimate, even though clues in lower levels describe things you have done or can do. Record your self-estimate in the proper box on the Aptitude Self-Estimate Record. (The Aptitude Self-Estimate Record is located in the **Aptitudes Checklist** and in the **Individualized Activities for Career Exploration** booklet.) Repeat the process for each aptitude.

Remember, you can change the estimates you have made at any time you discover additional information about your abilities, such as grades, test scores, or experiences.

Understanding instructions, facts, and underlying reasonings. Being able to reason and make judgments.

General Aptitude is closely related to the ability to do well in school. This aptitude is related to more Worker Trait Groups than any other.

CLUES

Clues are related to each level of Aptitude G, General.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I need someone to explain the instructions to me when I assemble or make something.
- I usually receive special help in school, and still find it difficult.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in basic subjects (English, math, social studies, science) are mostly D's.
- I can follow instructions if they are given clearly.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in basic subjects (English, math, social studies, science) are mostly C's.
- I can do things that require problem solving, such as in the following activities.

  (a). File materials according to the alphabet or some other method.

  (b). Take care of a person who is ill or is recovering from an accident or operation.

  (c). Assemble a bicycle or other equipment which has been purchased unassembled.

  (d). Knit, crochet, sew, or similar activities.

  (e). Sell tickets or merchandise and keep the necessary records.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in basic subjects (English, math, social studies, science) are mostly B's.
- I have built complex working models which require reading blueprints or detailed diagrams.
- I have received an "Excellent" rating in a science fair.
- I regularly do voluntary reading of books and magazines.
- I have no difficulty in using the card file to locate materials in the school or community library.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in basic subjects (English, math, social studies, science) are mostly A's.
- I can solve difficult problems in math or science.
- I have received a "Superior" rating in a science fair.
- I have won awards or recognition in writing or speaking contests.
- I have tutored other students in their schoolwork.

Note: If you are able to understand and work this exercise, you should rate yourself above Level 5.

APTITUDE V: VERBAL

Understanding the meanings of words and ideas. Using them to present information or ideas clearly.

Verbal Aptitude includes understanding how words relate and the meanings of whole sentences and paragraphs. It also includes communicating information and ideas to others.

CLUES

Clues are related to each level of Aptitude V, Verbal.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I have a lot of difficulty with most high school subjects which require much reading or writing.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in English and social studies are mostly D's.
- I have difficulty in writing book reports or themes, or giving oral reports.
- It is sometimes hard for me to follow instructions when I assemble models, make jewelry, or sew.
- I can usually follow recipes for cooking or baking.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in English, social studies, and foreign language are mostly C's.
- My grades on book reports, themes, term papers, and oral reports are mostly C's.
- I know spelling, grammar, and punctuation well enough to notice and correct obvious mistakes.
- I am an average word games and word puzzles player.
- I can follow printed instructions for making jewelry, assembling models, or sewing.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in English, social studies, and foreign language are mostly B's.
- My grades on book reports, themes, term papers, and oral reports are mostly B's.
- I seldom make grammatical errors in written work and notice them when others make them in writing or speaking.
- I have no difficulty in understanding the textbooks I read in English and social studies.
- I am a better than average word games and word puzzles player.

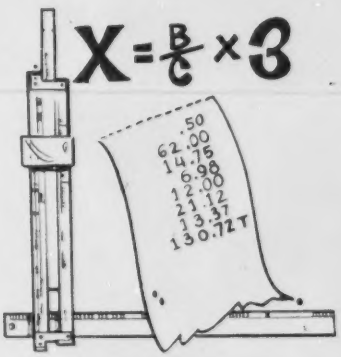
Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in such subjects as English, social studies, and foreign language are mostly A's.
- I have won awards or recognition in writing, public speaking, or debating.
- My grades on book reports, themes, term papers, and oral reports are mostly A's.
- I have written articles for the school paper or for other publications.
- I often win at word games such as Scrabble or Password.
- I can solve crossword puzzles, anagrams, and other word problems quickly and correctly.

Note: If you are able to understand and work this exercise, you should rate yourself above Level 5.

APTITUDE N: NUMERICAL

Doing arithmetic operations quickly and correctly.



Numerical Aptitude includes solving arithmetic or story problems.

CLUES

Clues are related to each level of Aptitude N, Numerical.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I have a lot of difficulty with most high school subjects which require the use of arithmetic.
- I have difficulty measuring things correctly.
- I have difficulty counting my change when I buy something at the store.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in mathematics and science are mostly D's.
- I can measure an object or figure its height, width, and depth.
- I can follow a recipe to measure and mix ingredients to cook or bake.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in mathematics and science are mostly C's.
- I can add, subtract, multiply, and divide numbers with about average speed and accuracy.
- I have a job (such as a paper route) which requires me to keep correct records of money or materials.
- I have a hobby which requires correct use of mathematics.
- I can adjust the proportions of a recipe to increase or decrease the quantity to be prepared.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in mathematics and science are mostly B's.
- I can multiply and divide decimals and fractions quickly and correctly.
- I know how to use a slide rule or a pocket calculator with memory features.
- I can use formulas to compute areas, volumes, interest rates, etc.
- I can solve puzzles and word problems which require the use of mathematics quickly and correctly.
- I have a hobby which requires accurate use of mathematics.
- I can adjust the proportions of a recipe to increase or decrease the quantity to be prepared.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in mathematics and science are mostly A's.
- I can use algebra and other advanced mathematics to find the answers to questions.
- I can use a slide rule or pocket calculator quickly and correctly to solve difficult problems in mathematics.
- I can usually solve puzzles and word problems which require the use of mathematics very quickly and correctly.

APTITUDE S: SPATIAL

Looking at flat drawings or pictures of objects. Forming mental images of them in three dimensions — height, width, and depth.

Spatial Aptitude is to see how an object shown in a flat drawing or picture would actually look like in three dimensions. This aptitude is required for such tasks as drawing or reading blueprints, or working geometry problems.

CLUES

Clues are related to each level of Aptitude S, Spatial.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I have difficulty in working with drawings and diagrams or with sizes, shapes, and arrangements.
- My eyesight is poor.
- I cannot estimate such things as distance, height, weight, or speed.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in art, geometry, sewing, and mechanical drawing are mostly D's.
- I cannot draw, paint, or sculpture very well.
- I can use a needle and thread to sew on buttons, hooks, patches, etc.
- I enjoy arranging things so that they look nice.
- I can arrange packages in a large container such as a grocery sack or a car trunk to make them fit.
- When I play chess, checkers, billiards, or shuffleboard, I seldom win.
- I seldom work block puzzles or jigsaw puzzles because I find them difficult.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in art, geometry, sewing, and mechanical drawing are mostly C's.
- I am average in drawing, painting, or sculpturing.
- I can dance (modern or ballet) well.
- I can sew clothes from a pattern.
- I am an average chess, checkers, billiards, or shuffleboard player.
- I can solve block and jigsaw puzzles but lose interest in the hard ones.
- I can usually read drawings or diagrams for assembling models or doing electrical work.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

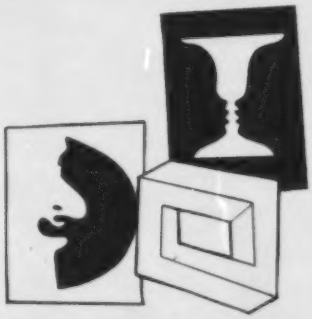
- My grades in art, geometry, sewing, and mechanical drawing are mostly B's.
- I can make my own clothing quite well.
- I can draw, paint, or sculpture better than average.
- I have won recognition or awards for modern or ballet dancing.
- I am a better than average chess, checkers, billiards, or shuffleboard player.
- I can solve block and jigsaw puzzles better than average.
- I can read and understand electronic circuit diagrams. I can also assemble or repair radios or high fidelity components.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in art, geometry, sewing, and mechanical drawing are mostly A's.
- I have received awards or recognition for drawings, paintings, or sculpture.
- I have won awards or recognition for clothes designing or sewing.
- When I play chess, checkers, billiards, or shuffleboard, I usually win.
- I quickly solve difficult block puzzles and jigsaw puzzles.
- I have no difficulty in reading complicated wiring diagrams and drawings or blueprints.
- I assemble models from kits, repair radios or high fidelity components correctly and well.

APTITUDE P: FORM PERCEPTION

Observing detail in objects or drawings. Noticing differences in shapes or shadings.



Form Perception is to notice detail in pictorial or graphic material and to make visual comparisons. It also includes seeing differences in shapes and figures or in the width or length of lines.

CLUES

Clues are related to each level of Aptitude P, Form Perception.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I have difficulty in recognizing differences or likenesses in sizes or shapes.
- My eyesight is poor.

Level 4. "I rate myself in the **bottom third** but **not** the bottom ten percent of people my age."

- My grades in art, science, shorthand, and mechanical drawing are mostly D's.
- I seldom work jigsaw puzzles because I find them difficult.
- I have no difficulty in sorting nuts, bolts, screws, and similar items according to size and shape.
- I can iron clothing neatly.
- I can tell when fruits and vegetables are ready for picking.
- I seldom paint or do other art work because I do not like the way the result of my work looks.
- I can repair and glue furniture parts, picture frames, and wooden objects.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in art, science, shorthand, and mechanical drawing are mostly C's.
- I can use a camera to take attractive photographs.
- I can usually solve jigsaw puzzles.
- I usually notice when pictures, mirrors, or other objects are slightly crooked.
- I can use a sewing machine and follow a pattern.
- I can plan and prepare a meal for a family of four or five.
- I can identify cars by make, model, and year.
- I do average or better than average work in the school band, orchestra, or chorus.
- I can identify trees from their shape, leaves, and bark.

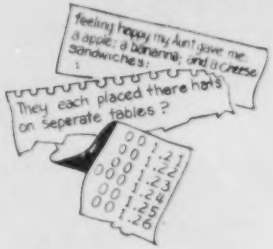
Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in art, science, shorthand, and mechanical drawing are mostly B's.
- I have won recognition or awards in photography.
- I can develop, print, and enlarge my own photographs.
- I can usually solve difficult jigsaw puzzles.
- I design clothing, furniture, toys, or models well.
- I can print or do other art work well.
- I can read fairly difficult music.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in art, science, shorthand, and mechanical drawing are mostly A's.
- I can quickly see small differences in the shape or size of similar objects even when most people cannot.
- I can use a microscope to study the important details of biological specimens.
- I can solve difficult jigsaw puzzles very well.
- I have won recognition or awards for original designs, such as clothing, furniture, or art work.

APTITUDE Q: CLERICAL PERCEPTION



Observing details and recognizing errors in numbers, spelling, and punctuation in written materials, charts, and tables. Avoiding errors when copying materials.

Clerical Perception is to observe differences in printed or written copy, proofread words and numbers, and avoid careless numerical errors. It is also to check — quickly, correctly, and at a glance — whether objects are properly made or tasks correctly done. Examples may include the following tasks.

- Make sure that a sewing machine is properly threaded.
- Inspect an item for flaws.
- Check whether assembled parts fit well together.

CLUES

Clues are related to each level of Aptitude Q, Clerical Perception.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- School subjects which require figuring or close attention to detail are difficult for me.
- I have difficulty in finding misspelled words on a page.
- It is difficult for me to look over a column of numbers and find any that are incorrect.

Level 4. "I rate myself in the **bottom third** but **not** the bottom ten percent of people my age."

- I can usually follow recipes for cooking or baking.
- It is difficult for me to follow detailed instructions or keep accurate records.
- I make a lot of careless mistakes in spelling and arithmetic.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in business subjects, English, and mathematics are mostly C's.
- I can file materials according to the alphabet or some other system.
- I can follow written instructions to knit, crochet, weave, sew, cook a meal, or bake cookies.
- I can read diagrams and follow most instructions for assembling a model or a piece of equipment.
- When I play games that require a fast and accurate use of words and numbers, I am an average player.
- When I make mistakes in arithmetic and spelling, I usually notice them when I check my work.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in business subjects, English, and mathematics are mostly B's.
- I can copy records and reports quickly and correctly by hand or with a typewriter.
- I have done a good job as the club's secretary or treasurer, or as the athletic team's manager.
- I can use the card file to locate materials in the library quickly and correctly.
- As a newspaper carrier or cashier in a grocery store, I have kept records or handled money well.
- I can read and follow cooking or sewing instructions easily.
- I seldom make errors in spelling, punctuation, or simple arithmetic. I quickly notice these kinds of errors when others make them.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in business subjects, English, and mathematics are mostly A's.
- When I play games that require a fast and accurate use of numbers, I am an excellent player.
- I excel in hobbies which require following detailed instructions or diagrams.

APTITUDE K: MOTOR COORDINATION

Moving the eyes and hands or fingers together to perform a task rapidly and correctly.

Motor Coordination means making the eyes and hands or fingers work together to perform, for example, the following tasks.

- Guide objects into position.
- Sort or assemble parts.
- Operate a typewriter or other office machine.
- Perform surgery or dental work in a rapid and accurate manner.
- Make accurate movements rapidly in response to a signal or an observation.

CLUES

Clues are related to each level of Aptitude K, Motor Coordination.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I cannot perform tasks that require fast and accurate use of my eyes, fingers, and hands.
- A physical handicap prevents me from doing rapid or accurate handwork or other movements.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in typing, shorthand, physical education, industrial arts, or home economics are mostly D's.
- My grades on shop projects are mostly D's.
- I can do physical work if it does not require precise movements.
- I am not active in varsity sports or usually do not make the first team.
- I have had part-time jobs such as washing cars, raking leaves, or doing general cleaning, and performed well.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in typing, shorthand, physical education, industrial arts, or home economics are mostly C's.
- My grades on shop projects are mostly C's.
- I am active in varsity sports and an average player.
- I have had part-time jobs such as delivering papers, taking care of lawns, or working at a drive-in, and performed well.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in typing, shorthand, physical education, industrial arts, or home economics are mostly B's.
- My grades on shop projects are mostly B's.
- I am a good ping-pong, golf, swimming, basketball, softball, or volleyball player.
- I can paint, sew, assemble models, knit, work fine metal or wood, play a musical instrument, or twirl a baton quite well.
- I have had part-time jobs as a typist, cashier, playground or assembly worker, and performed well.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in typing, shorthand, physical education, industrial arts, or home economics are mostly A's.
- My grades on shop projects are mostly A's.
- I excel in one or more sports such as ping-pong, golf, swimming, basketball, softball, or volleyball.
- I excel in dancing, baton twirling, painting, playing a musical instrument, or target shooting.

APTITUDE F: FINGER DEXTERITY

Moving the fingers to work with small objects rapidly and correctly.

Finger Dexterity means using the fingers to perform, for example, the following tasks.

- Surgery and dental work.
- Typing and taking shorthand.
- Playing a musical instrument.
- Doing fine work with hand tools.

CLUES

Clues are related to each level of Aptitude F, Finger Dexterity.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I cannot perform tasks which require small, detailed work with my fingers quickly and correctly.
- I have a physical handicap which prevents me from doing fine work with my fingers.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in typing, shorthand, industrial arts, or home economics are mostly D's.
- I can mend my clothes or adjust hems.
- I can refinish furniture, pick berries, peel fruits, or prepare vegetables for cooking.
- I cannot do very fine work with my fingers very well.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in typing, shorthand, industrial arts, or home economics are mostly C's.
- I help make some of my clothes.
- I can build models, crochet, carve wood, assemble or repair electronic equipment fairly well.
- I can repair broken extension cords, leaky faucets, or broken toys.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

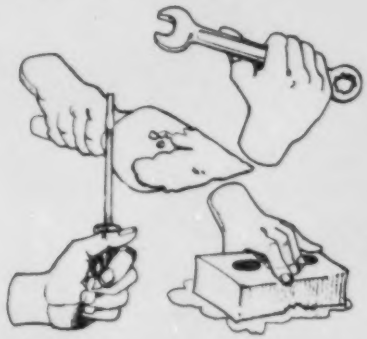
- My grades in typing, shorthand, industrial arts, or home economics are mostly B's.
- I play in the school band or orchestra.
- I make many of my own clothes.
- I can build models, crochet, carve wood, assemble or repair electronic equipment, or sculpture quite well.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in typing, shorthand, industrial arts, or home economics are mostly A's.
- I have received awards or recognition as an instrumental musician.
- I can build models, sew, carve wood, assemble or repair electronic equipment, or sculpture expertly.

APTITUDE M: MANUAL DEXTERITY

Moving the hands with ease and skill. Working with the hands in placing and turning motions.



Manual Dexterity means using the hands to perform, for example, the following tasks.

- Directing a band or orchestra.
- Designing displays or exhibits.
- Building models.
- Working as a juggler or acrobat.
- Making furniture.
- Operating office equipment.
- Grooming pets.

CLUES

Clues are related to each level of Aptitude M, Manual Dexterity.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I cannot perform tasks which require the use of one or both of my hands quickly and correctly.
- I have a physical handicap which prevents me from working rapidly and correctly with my hands.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in physical education, home economics, industrial arts, or instrumental music are mostly D's.
- I can use a hammer or pliers to make simple repairs. I can also use a paint brush or roller to paint a room.
- I can wash windows and polish furniture well.
- I am not a very good volleyball, basketball, tennis, or baseball player.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in physical education, home economics, industrial arts, or instrumental music are mostly B's and C's.
- I do odd jobs around the house, such as repairing extension cords or decorating and arranging my own room.
- I can trim shrubbery, plant a garden, or use a power mower quite well.
- I am an active and average volleyball, basketball, tennis, or baseball player.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

- My grades in physical education, home economics, industrial arts, or instrumental music are mostly A's and B's.
- I make many of my own clothes.
- I play an instrument in the school band or orchestra.
- I do magic tricks or puppetry well enough to entertain an audience.
- I perform well in activities such as juggling, judo, or gymnastics.
- I can use hand tools such as saws, screwdrivers, or paint brushes quite well.
- I am a good volleyball, basketball, or tennis player.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in physical education, home economics, industrial arts, or instrumental music are mostly A's.
- I can play one or more musical instruments very well.
- I have won recognition or awards in painting, carving, sculpturing, or industrial arts.
- I excel in such sports as volleyball, basketball, or tennis.

APTITUDE E: EYE-HAND-FOOT COORDINATION

Moving the hands and feet together in response to visual signals or observations.

Eye - Hand - Foot Coordination means moving the hands and feet together in response to a visual signal indicating the need to react. It includes such tasks as piloting a plane, driving a car or tractor, or operating a duplicating machine.

CLUES

Clues are related to each level of Aptitude E, Eye-Hand-Foot Coordination.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I have difficulty in sports which require running, jumping, or throwing and hitting a ball quickly or correctly.
- I have a physical handicap which prevents me from moving my eyes, hands, and feet together.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in physical education are mostly D's.
- It would be very hard for me to play an instrument and do marching formations at the same time.
- I am not active in basketball, volleyball, tennis, or similar sports because I am not very good in them.
- I can mow the lawn, take care of the garden, bathe the dog, or do general housework.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in physical education are mostly B's and C's.
- I am in the marching band.
- I can ride a bicycle or operate a riding mower easily.
- I am an average tennis, volleyball, or basketball player.
- I can drive a car with a stick shift.

Level 2. "I rate myself in the **top third** but **not** the top ten percent of people my age."

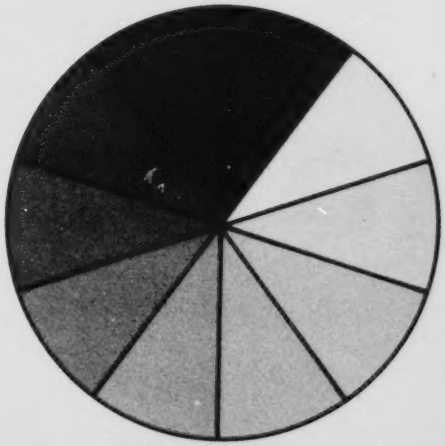
- My grades in physical education are mostly A's and B's.
- I can twirl a baton, ice-skate, ride a bicycle, or perform gymnastics quite well.
- I am a good tennis, volleyball, or basketball player.
- I have had dancing lessons and performed well in dance recitals.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in physical education are mostly A's.
- I have performed as a solo ballet dancer. I have also had advanced training in other forms of dance.
- I have won awards or recognition as a gymnast.
- I can play difficult music on the organ.
- I have won awards or special recognition for baton twirling.

APTITUDE C: COLOR DISCRIMINATION

Seeing likenesses or differences in colors or shades. Identifying or matching certain colors. Selecting colors which go well together.



Color Discrimination is to recognize harmonious, contrasting, or specific colors and shades in order to perform, for example, the following tasks.

- Art work or decorating.
- Analyzing chemicals, metals, or animal tissues.
- Mixing paints.

CLUES

Clues are related to each level of Aptitude C, Color Discrimination.

Level 5. "I rate myself in the **lowest ten percent** of people my age."

- I cannot select colors that people say go well together.
- I prefer to buy clothes with someone's help to make sure that the colors go well together.
- I am color blind.

Level 4. "I rate myself in the **bottom third** but **not** as low as the bottom ten percent of people my age."

- My grades in art are mostly C's and D's.
- I have never taken art as an elective subject.
- When I plan my wardrobe, I usually need someone's help to make sure colors go well together.
- I can see the difference between red and green traffic lights. However, it is difficult for me to see differences in colors which are not so bright and clear.

Level 3. "I rate myself about average, or in the **middle third** of people my age."

- My grades in art are mostly B's and C's.
- I take quite good pictures with my camera. I can recognize colors that are not sharp or clear.
- I plan my clothes so colors go well together.
- I have helped design scenery for a play.

Level 2. "I rate myself in the **top third** but **not** in the top ten percent of people my age."

- My grades in art are mostly A's and B's.
- I have designed some of my clothes.
- I am often asked to make posters for school activities or other events.
- I have selected the colors and the fabrics to decorate my own room or other rooms in the house.
- I can almost always recognize fine differences in color tones or shades.

Level 1. "I rate myself in the **top ten percent** of people my age."

- My grades in art are mostly A's.
- I have won awards or recognition for painting or have sold some of my art work.
- I design my own clothes.
- I can easily tell differences between very similar tints and shadings of color.

Aptitude — Worker Trait Group Index

The following index shows the general relation of the Worker Trait Groups and the eleven aptitudes defined by the Department of Labor. The key aptitudes and levels of those aptitudes associated with average satisfactory performance are given for each Worker Trait Group. They indicate the aptitude you would need in order to learn the knowledge and skills of the occupations in that group. When a level number, such as a 2, or range, such as 2-3, appears across from a Worker Trait Group, most occupations in that group are rated for that aptitude and level.

Most Worker Trait Groups have a combination of different aptitudes, often at different levels. The levels in this index represent the key aptitudes and levels associated with the group as a whole. The relation of these aptitudes to specific occupations with each WTG varies to some degree. As you explore specific occupations, you may find more information on the aptitudes used in that work.

To use the index, place your completed Self-Estimate Record below the first Worker Trait Group which interests you. Your aptitude estimates will appear directly below the aptitude levels given for the group.

APTITUDES INDEX

	WORKER TRAIT GROUP	KEY APTITUDES BY LEVEL										
No.	Title	G	V	N	S	P	Q	K	F	M	E	C
01.01	Literary Arts	1-2	1-2									
01.02	Visual Arts	2-3			2	2		2-3	1-2-3	2-3		2
01.03	Performing Arts: Drama	2	2									
01.04	Performing Arts: Music	1-2-3	1-2-3			2-3	2-3	2	2	2	1-2	
01.05	Performing Arts: Dance	2-3			2-3			2-3			1-2	
01.06	Technical Arts	3			2-3	2-3		3	2-3	3		3
01.07	Amusement	3	3									
01.08	Modeling	3-4						3-4		3-4		
02.01	Physical Sciences	1	1		1-2	2	3	3				3
02.02	Life Sciences	1	1-2	1-2	1-2-3	1-2-3			2-3	3		3
02.03	Medical Sciences	1	1-2	1-2	1-2	1-2		2-3	1-2			3
02.04	Laboratory Technology	2-3		2-3	3	2-3	3-4	3	3	3		3
03.01	Managerial Work: Nature	2-3	3	3	3-4		3-4					
03.02	General Supervision: Nature	3	3	3	3					3		
03.03	Animal Training and Care	3-4	3-4			3-4		3-4	3-4	3	3-4	
03.04	Elementary Work: Nature					3-4		3-4	4	3		
04.01	Safety and Law Enforcement	2-3	2-3			3-4	3					
04.02	Security Services	3	3			3-4	4	3-4		3-4		
05.01	Engineering	1-2	1-2	1-2	2	2-3						
05.02	Managerial Work: Mechanical	2	2	2-3	2-3	3	3					
05.03	Engineering Technology	2-3		2-3	2-3	2-3	3	2-3	2-3	3		
05.04	Air and Water Vehicle Operation	2	2-3	2-3	2	2-3	3	3	3-4	3	3	

APTITUDES INDEX

	WORKER TRAIT GROUP	KEY APTITUDES BY LEVEL										
No.	Title	G	V	N	S	P	Q	K	F	M	E	C
05.05	Craft Technology	3		3	2-3	2-3		3	3	2-3		
05.06	Systems Operation	3	3	3	3-4		3-4	3-4		3-4		
05.07	Quality Control	3		3-4	3	3				3-4		
05.08	Land Vehicle Operation	3			3			3		3	3	4
05.09	Materials Control	3	3	3			3			3-4		
05.10	Skilled Hand and Machine Work			3-4	3	3		3	3-4	3		
05.11	Equipment Operation	3			3			3		3	3-4	
05.12	Elemental Work: Mechanical				3-4	3-4		3-4		3		
06.01	Production Technology	3		3	3	3		3	3	3		
06.02	Production Work	3		3-4	3-4	3		3-4	3-4	3		
06.03	Production Control	3			3-4	3		3-4	3-4	3		
06.04	Elemental Work: Industrial				4	3-4		3-4	3-4	3		
07.01	Administrative Detail	2-3	2-3	3			2-3					
07.02	Mathematical Detail	3	3	3			2-3					
07.03	Financial Detail	3	3	3			3		3-4			
07.04	Information Processing — Speaking	3	3	3-4			2-3	3-4				
07.05	Information Processing — Records	3	3	3-4			2-3		3-4			
07.06	Clerical Machine Operation	3					2-3	2-3	3	3-4		
07.07	Clerical Handling	3-4	3-4				3		3-4	3-4		
08.01	Sales Technology	2-3	2-3	2-3		3	3					
08.02	General Sales	3	3	3			3					
08.03	Vending	4	4	3-4					3-4	3-4		

APTITUDES INDEX

	WORKER TRAIT GROUP	KEY APTITUDES BY LEVEL										
No.	Title	G	V	N	S	P	Q	K	F	M	E	C
09.01	Hospitality Services	3	3				3-4					
09.02	Barbering and Beauty Services	3	3		3	2-3		2	3	3		3
09.03	Passenger Services	3		3-4	3			3		3	3	
09.04	Customer Services	3-4	3-4	3-4			3-4	3-4	4	3-4		
09.05	Attendant Services	3-4	3-4						4	3-4		
10.01	Social Services	1-2	1-2	3								
10.02	Nursing and Therapy Services	2	2-3	2-3	3	3	3-4	3-4	3	3		3-4
10.03	Child and Adult Care	3	3				3-4	3-4	3-4	3		
11.01	Mathematics and Statistics	1-2	1-2	1-2	2		2					
11.02	Educational and Library Services	1-2	1-2	3			2-3					
11.03	Social Research	1-2	1-2	2-3			2-4					
11.04	Law	1-2	1	1-3			3					
11.05	Business Administration	2	2	2-3			3					
11.06	Finance	2	2	2			2-3					
11.07	Services Administration	2	2	3			3					
11.08	Communications	1-2	1	3			3					
11.09	Promotion	2	2	2-3			3-4					
11.10	Regulations Enforcement	2-3	2-3	3	3-4	3-4	3					
11.11	Business Management	2-3	2-3	3		3-4	3					
11.12	Contracts and Claims	2	2	3			3					
12.01	Sports	3	3-4		3-4	3-4	3-4	2	2	2	1	
12.02	Physical Feats	3			2	3		2-3	2-3	2-3	1-2	

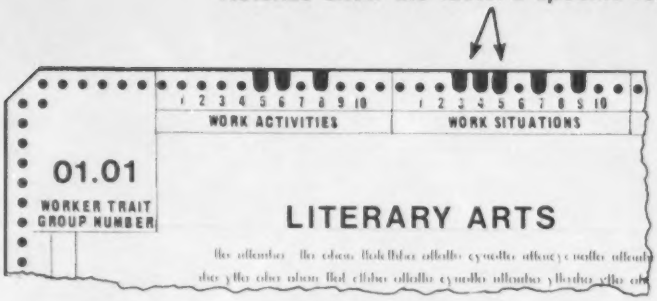
Worker Trait Group Keysort Deck Instructions

The Worker Trait Group Keysort Deck* is used to help you identify groups of occupations related to your interests, abilities, and other personal characteristics. You can sort the cards on the basis of these personal characteristics. The Keysort Deck contains 66 cards, one for each Worker Trait Group (WTG). Printed on the card is the Area/Worker Trait Group number, title, a brief description of the group, and a listing of occupational subgroup examples.

KEYSORT CARD ILLUSTRATION

Selected **factors** used to locate career information through Worker Trait Groups are printed around the edges of the card. The card's edges also have a series of numbered holes which represent the different parts of the factors. Each of these factors has a **specific** relationship to the Worker Trait Groups. This relationship is shown by a notch or punch in the appropriate numbered hole. The following example shows how one factor — the types of Work Activities — relates to the Worker Trait Group "Literary Arts."

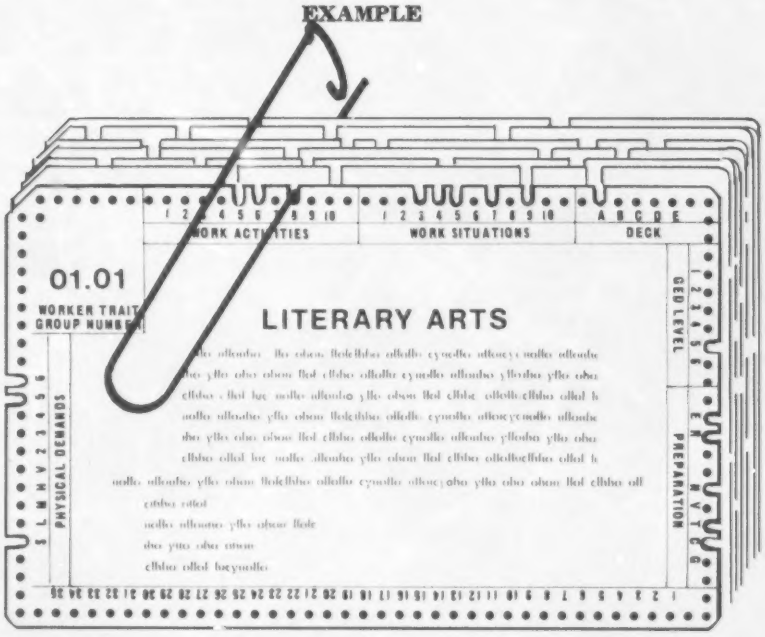
* Developed by Appalachia Educational Laboratory, Inc. and published by McKnight Publishing Company.



Note that holes 5, 6, and 8 have been notched. This means that these three types of Work Activities are related to this Worker Trait Group. These three types of Work Activities have the following titles:

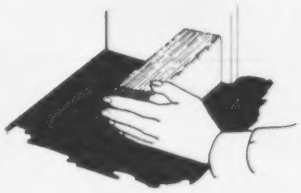
5 — Activities Resulting in Recognition or Appreciation from Others.
6 — Activities Involving the Communication of Ideas and Information.
8 — Activities Involving Creative Thinking.

To identify the Worker Trait Groups related to a particular part of a factor, a special needle is used to sort the deck of cards. For example, to sort the deck for Work Activity No. 8, Creative Thinking, the sorting needle would be inserted in the hole No. 8 of the Work Activities section.



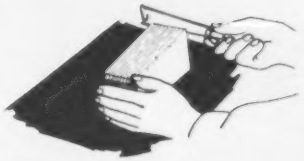
The Keysort cards having the hole of Work Activity No. 8 punched will fall from the deck. These cards represent the Worker Trait Groups involving Creative Thinking. The Keysort Deck may be sorted to identify Worker Trait Groups related to each factor part or may be sorted to combine several parts. The following steps describe how to sort the deck.

Step 1. Line up the deck with all cards face up and squared corners together at the left. Any card not in the deck correctly will have a rounded edge sticking up among the squared corners. Check the Deck code holes. All of the cards should have the same hole(s) punched. Any not punched the same as the others is in the wrong deck. Remove the card(s).



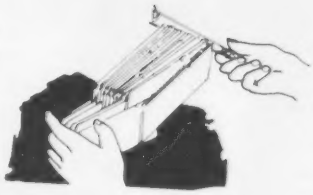
Step 2. On the border of the cards, locate the factor for which you will sort. Turn the deck, if necessary, so that this factor is on top. "Jog" or strike the ends of the deck against a flat surface to get them even and the holes lined up.

Step 3. On the front card, locate the factor number or letter. Keep a steady hold on the cards with one hand. Insert the sorting needle with the other hand. For example, if the factor part you sort on is Work Activity No. 8, insert the needle in the hole numbered 8.



Step 4. After the needle is inserted in the hole, relax your hold on the cards, but continue to support them. Lift up and gently shake the needle. As you lift and shake the needle, cards which have the factor number you sorted will slide down and out of the deck. You can guide these cards with your hand as they start to fall.

Step 5. Place the cards which fall from the deck into a stack, face up. These cards represent Worker Trait Groups related to the factor part for which you sorted. Check the cards which remain on the needle. Be sure all of the loose cards have come out of the deck.



Step 6. Remove the remaining cards from the needle and place them face down in a separate stack. Be sure to keep this stack separate from those that fell out of the deck.

You should have two stacks of cards when you finish sorting the deck. The "face up" stack should contain the cards that dropped out of the deck. The other stack "face down" should contain the cards that stayed on the needle. The "face up" stack represents the Worker Trait Groups related to the factor on which you sorted.

Read the titles and brief paragraph descriptions of all the cards in your "face up" deck. To explore any or all of these Worker Trait Groups in more detail, use the Worker Trait Group number in the upper lefthand corner. This number is keyed to the Career Information System materials. Full descriptions of the Worker Trait Groups are located in the **Worker Trait Group Guide.** Other occupational information is filed and indexed by the Worker Trait Group number.

SORTING INSTRUCTIONS

WORK ACTIVITIES

The deck is designed to help you identify Worker Trait Groups related to your preferred Work Activities. As a result, before using the deck, you should have completed the following activities to help you identify your preferences.

- Viewing the filmstrip "Work Activities" (**Work Activities Checklist,** Part I or **Individualized Activities for Career Exploration,** Activity H)
- Reviewing the Work Activity descriptions (**Career Information System Guide**)
- Completing the Work Activities Checklist (**Work Activities Checklist,** Part II or **Individualized Activities for Career Exploration,** Activity H)

There are three types of sorting methods you can use to identify Worker Trait Groups related to your preferred Work Activities. As you follow the instructions for the three methods, use the order of preference in which you ranked the types of Work Activities in the checklist.

A. **The "Or" Sorting Method.** This method is used to identify Worker Trait Groups related to the type of Work Activity you rated as your **first,** or **second,** or **third** choice. This will identify the Worker Trait Groups related to **at least one** of your first three choices.

B. **The "And" Sorting Method.** This method is used to identify Worker Trait Groups related to **all** three of your first three choices.

C. **The "Negative" Sorting Method.** This method is used to identify Worker Trait Groups that are related to the Work Activities you **dislike.**

The three sorting methods can be used independently or in sequence. They may also be combined.

"Or" Sorting Method: Specific Instructions

1. Locate the Work Activity number on which you want to sort.
2. Insert the needle through the numbered hole for your **first choice.** The cards which fall from the deck should be placed "face up." This is your **"keep stack."**
3. Insert the needle through the numbered hole for your **second choice.** The cards which fall from the deck should be placed face up on top of your "keep stack."
4. Repeat this procedure for your **third choice.** The cards that remain on the needle after your third choice sort should be placed "face down." This is your discard stack.
5. Read the titles and brief descriptions of the cards in your "keep stack." You can discard any that do not interest you. For more detailed exploration of any groups, you may read their expanded descriptions in the **Worker Trait Group Guide.***

If you now wish to follow the "And" Sorting Method, just use the cards in your "keep stack."

"And" Sorting Method: Specific Instructions

1. Locate your **first choice** Work Activity number and insert the needle through the numbered hole. The cards which fall from the deck should be placed "face up." This is your "keep stack." The cards that stay on the needle should be placed "face down." This is your "discard stack."
2. Sort the "keep stack" of cards again by inserting the needle into the hole numbered for your **second choice.** Keep the cards that fall from the deck. The cards that stay on the needle were related to your first choice but not your second choice. You should review what Worker Trait Groups you are eliminating before placing them "face down" on your "discard stack." If you are really interested in a particular Worker Trait Group and you do not want to discard it, you can keep it in your "keep stack." Just remember that it was not related to your second choice.

* Developed by Appalachia Educational Laboratory, Inc. and published by McKnight Publishing Company.

3. The cards in your "keep stack" now represent Worker Trait Groups related to both your first and second choices. Review the Worker Trait Group titles.
4. Sort the "keep stack" using the hole numbered for your **third choice.** The cards that fall from the needle relate to your first **and** second **and** third choice. Use the procedures in Steps 2 and 3 to review the cards remaining on the needle. (You may not have had any cards remaining after the third sort.)
5. Now the "keep stack" represents those Worker Trait Groups that relate to **all three of your choices.** Review the Worker Trait Group titles and write down the Worker Trait Group numbers of these cards for further exploration.

"Negative" Sorting Method: Specific Instructions

1. Locate the number of the Work Activity you dislike and insert the needle through the numbered hole. The cards that fall from the deck are related to your "dislike" choice and should be **discarded.**
2. The cards that remain on the needle may also be sorted for other "dislike" choices.
3. You may wish to sort for your "dislike" choices on the "keep stack" from an "Or" or "And" Sorting Method.

The sorting methods may also be used to combine two different factors such as Work Activities and Work Situations. To sort on two factors, use the "keep stack" from the first factor to sort on the second factor.

WORK SITUATIONS

The deck is designed to help you identify Worker Trait Groups related to your preferred Work Situations. As a result, before you use the deck, you should have completed the following activities to help you identify your preferences.

- Viewing the filmstrip "Work Situations" (**Work Situations Checklist,** Part I or **Individualized Activities for Career Exploration,** Activity I)
- Reviewing the Work Situation descriptions (**Career Information System Guide**)
- Completing the Work Situations Checklist (**Work Situations Checklist,** Part II or **Individualized Activities for Career Exploration,** Activity I)

There are three types of sorting methods you can use to identify Worker Trait Groups related to your preferred Work Activities. As you follow the instructions for the three methods, use the order of preference in which you ranked the types of Work Activities in the checklist.

A. **The "Or" Sorting Method.** This method is used to identify Worker Trait Groups related to the type of Work Activity you rated as your **first,** or **second,** or **third** choice. This will identify the Worker Trait Groups related to **at least one** of your first three choices.

B. **The "And" Sorting Method.** This method is used to identify Worker Trait Groups related to **all** three of your first three choices.

C. **The "Negative" Sorting Method.** This method is used to identify Worker Trait Groups that are related to the Work Activities you **dislike.**

The three sorting methods can be used independently or in sequence. They may also be combined.

"Or" Sorting Method: Specific Instructions

1. Locate the Work Situation number on which you want to sort.
2. Insert the needle through the numbered hole for your **first choice.** The cards which fall from the deck should be placed "face up." This is your **"keep stack."**
3. Insert the needle through the numbered hole for your **second choice.** The cards which fall from the deck should be placed "face up" on top of your "keep stack."
4. Repeat this procedure for your **third choice.** The cards that remain on the needle after your third choice sort should be placed "face down." This is your discard stack.
5. Read the titles and brief descriptions of the cards in your "keep stack." You can discard any that do not interest you. For more detailed exploration of any groups, you may read their expanded descriptions in the **Worker Trait Group Guide.**

If you now wish to follow the "And" Sorting Method, just use the cards in your "keep stack."

"And" Sorting Method: Specific Instructions

1. Locate your **first choice** Work Situation number and insert the needle through the numbered hole. The cards which fall from the deck should be placed "face up." This is your "keep stack." The cards that stay on the needle should be placed "face down." This is your "discard stack."
2. Sort the "keep stack" of cards again by inserting the needle into the hole numbered for your **second choice.** Keep the cards that fall from the deck. The cards that stay on the needle were related to your first choice but not your second choice. You should review what Worker Trait Groups you are eliminating before placing them "face down" on your "discard stack." If you are really interested in a particular Worker Trait Group and you do not want to discard it, you can keep it in your "keep stack." Just remember that it was not related to your second choice.
3. The cards in your "keep stack" now represent Worker Trait Groups related to both your first and second choices. Review the Worker Trait Group titles.
4. Sort the "keep stack" using the hole numbered for your **third choice.** The cards that fall from the needle relate to your first **and** second **and** third choice. Use the procedures in Steps 2 and 3 to review the cards remaining on the needle. (You may not have had any cards remaining after the third sort.)
5. Now the "keep stack" represents those Worker Trait Groups that relate to **all three of your choices.** Review the Worker Trait Group titles and write down the Worker Trait Group numbers of these cards for further exploration.

"Negative" Sorting Method: Specific Instructions

The Work Situations relate to adaptive skills. On the checklist, you identified Work Situations you would like to avoid or to which you felt it would be difficult to adapt. The "Negative" Sorting Method can help you identify Worker Trait Groups related to these Work Situations.

1. Locate the number of the Work Situation you dislike and insert the needle through the numbered hole. The cards that fall from the deck are related to your "dislike" choice and should be **discarded.**
2. The cards that remain on the needle may also be sorted for other dislike choices.
3. You may wish to sort for your "dislike" choices on the "keep stack" from the "negative" sort on the cards remaining after an "Or" or "And" Sorting Method.

The sorting methods may also be used to combine two different factors such as Work Activities and Work Situations. To sort on two factors, use the "keep stack" from the first factor to sort on the second factor.

PREPARATION

The Preparation Section of the deck is designed to help you identify Worker Trait Groups related to your interests and preferences regarding education, training, and job entry. Read **all** of the following questions. Then, select the questions which best relate to your interests and follow the sorting procedures below these questions.

1. **What Worker Trait Groups include occupations for which a high school level vocational program would be adequate preparation?**

   Sort the deck using the "V" hole. The cards that drop will represent the Worker Trait Groups for which a vocational program would be a preparation route.

   a. **What kinds of jobs could I get immediately after completing a vocational course?**

      Sort the cards that have fallen using the "E" hole. The cards that drop will identify Worker Trait Groups which include entry occupations for people who have completed vocational programs.

b. **If I complete a vocational program, what long-range occupational goals might I hope to meet?**

Sort all of the cards which fell on the "V" sort using the "A" hole. The cards that drop will identify Worker Trait Groups which include occupations to which you might advance as an experienced worker with vocational training.

2. **What Worker Trait Groups include occupations for which a one- or two-year post high school technical program would be adequate preparation?**

Sort the deck using the "T" hole. The cards that drop will represent Worker Trait Groups for which a post high school technical program is required or is adequate.

a. **What kinds of jobs could I get immediately after completing a technical program?**

Sort the cards that have fallen using the "E" hole. The cards that drop will identify Worker Trait Groups which include entry jobs for people who have completed technical programs.

b. **If I complete a technical program, what long-range occupational goals might I hope to meet?**

Sort all of the cards which fell on the "T" sort using the "A" hole. The cards that drop will identify Worker Trait Groups which include occupations to which you might advance as an experienced work with technical training.

3. **What Worker Trait Groups include occupations for which a four-year college degree would be required or adequate preparation?**

Sort the deck using the "C" hole. The cards that drop will represent Worker Trait Groups for which a four-year college degree is required or adequate.

a. **What kinds of jobs could I get immediately after receiving a baccalaureate degree?**

Sort the cards that have fallen using the "E" hole. The cards that drop will identify Worker Trait Groups which include entry jobs for people who have completed four-year college degree programs.

b. **If I earn a four-year college degree, what long-range occupational goals might I hope to meet?**

Sort all of the cards which fell on the "C" sort using the "A" hole. The cards that drop will identify Worker Trait Groups which include occupations to which you might advance as an experienced worker with technical training.

4. **What Worker Trait Groups include occupations for which an advanced college degree (master or doctoral degree) would be required or preferred?**

Sort the deck using the "G" hole. The cards that drop will represent Worker Trait Groups for which a graduate college program is required or preferred.

5. **What Worker Trait Groups include occupations for which I might qualify after I leave school if I take no vocational or post high school programs?**

Sort the deck using the "N" hole. Keep the cards that drop and sort them again using the "E" hole. The cards that drop on this second sort will identify Worker Trait Groups which include entry jobs for people with no formal preparation and training. However, most employers prefer workers who have completed at least a high school education.

6. **If I go to work without completing a formal education or training program, what long-range occupational goals might I hope to meet?**

Sort the complete deck using the "N" hole. Keep the cards that drop and sort them again using the "A" hole. The cards that drop on this second sort will identify Worker Trait Groups which include occupations to which you might advance as an experienced worker with no formal preparation and training.

7. **What Worker Trait Groups include occupations that I might explore as potential for part-time and summer employment?**

Sort the deck using the "N" hole. Keep the cards that drop and sort them again using the "E" hole. The cards that drop on this second sort will identify Worker Trait Groups which include entry jobs requiring no formal education or training. Many of these occupations provide temporary employment for people working on post high school programs. However, you should also explore lower level jobs related to the occupations for which you

are preparing. Related work experience is often helpful in gaining employment after you complete your preparation.

8. **How can I combine my educational plans and my interests and other characteristics?**

When you complete any of the preceding sorts, you can use other factors on the Keysort cards such as Work Activities or Work Situations to do a second sort on the cards that dropped. The cards that drop on this second sort will identify Worker Trait Groups that relate to your educational plans as well as your preferences for work activities or other factors.

The various education and training programs related to the Preparation Factor are described in Appendix H of the **Worker Trait Group Guide.** You should review this information and understand the type of program related to each of the code letters.

PHYSICAL DEMANDS

Physical Demands are the physical requirements of an occupation and the physical capacities a worker must have to perform the major tasks. You can use the Keysort cards to identify Worker Trait Groups with occupations that have specific physical demands. This may be important to you if you are interested in special types of physical activities or if you are unable to perform certain types. This may be particularly important for individuals with sight, hearing, or other types of physical limitations.

First, read the Physical Demands descriptions in Appendix D of the **Worker Trait Group Guide.** Then select the Physical Demands for which you want to sort Worker Trait Groups. Identify the code numbers or letters of the Physical Demands. You will use these codes as you follow the sorting procedures.

Sorting Procedures

1. To find Worker Trait Groups related to Physical Demands you might **like** to perform, insert the Keysort needle in the hole coded for the one most important to you. The cards that fall from the deck represent Worker Trait Groups you may want to explore further. If you are sorting on more than one Physical Demand, repeat this process with the entire deck. You may want to examine some of these Worker Trait Groups further.
2. To find Worker Trait Groups related to Physical Demands you may wish to **avoid,** sort the deck using the codes for those Physical Demands. The cards that fall from the deck represent Worker Trait Groups you should examine carefully. Remember, all of the occupations that belong to a Worker Trait Group may not require each Physical Demand. As you explore at the occupational level, you should look for this requirement.
3. You may combine sorting on Physical Demands with other factors. This procedure can help you sort out Worker Trait Groups related to Physical Demands you wish to avoid as you sort on other factors.

GENERAL EDUCATIONAL DEVELOPMENT (GED)

General Educational Development (GED) is the combination of knowledge and reasoning ability related to successful job performance. There are six GED levels ranging from one (low) to six (high). Each Worker Trait Group has been assigned one or more GED levels.

Each of the GED levels may be considered in terms of interest and ability. Read the GED statements found in Appendix G of the **Worker Trait Group Guide.** Note how they range from concrete (low) to abstract (high) with different combinations in between. You may not now have the knowledge and reasoning skills represented by some of the GED statements. However, you can plan on obtaining them as you gain experience. You may learn these skills through experience outside of school as well as in school or formal training programs.

You may use the following sorting methods to identify Worker Trait Groups related to GED levels.

Method A. This method is designed to help you get an understanding of the Worker Trait Groups related to each of the GED levels. To do this start with the **highest level.** Insert the needle

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